

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
Issued Date	Dec. 15, 2015
Report No.	1530316R-RFUSP05V00
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

Issued Date: Dec. 15, 2015

Report No.: 1530316R-RFUSP05V00



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
FCC ID.	2AEDY-EM10-00
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 E: 2013 ANSI C63.4: 2014, ANSI C63.10: 2013 FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04
Test Result	Complied

Documented By :

Joanne Lin

(Senior Adm. Specialist / Joanne Lin)

Tested By :

Nick Chen

(Engineer / Nick Chen)

Approved By :

Vincent Lin

(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Dual Band Wireless-AC 3160
Trade Name	EMPATHY
FCC ID.	2AEDY-EM10-00
Model No.	3160NGW
Frequency Range	802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz 802.11ac-20MHz: 5720, 802.11ac-40MHz: 5710 802.11ac-80MHz: 5210-5290MHz, 5530-5690MHz
Number of Channels	802.11a/n-20MHz: 19; 802.11n-40MHz: 9 802.11ac-20MHz: 1, 802.11ac-40MHz: 1, 802.11ac-80MHz: 4
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 150Mbps 802.11ac-80MHz: up to 433.3MHz
Channel Control	Auto
Type of Modulation	802.11a/n: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna Type	Dipole Antenna
Antenna Gain	Refer to the table "Antenna List"
Test Platform	Brand Name: EMPATHY, M/N: EM10

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	EMPATHY	ATWLN0	Dipole Antenna	-2.90dBi for 5.15~5.25GHz 0.30dBi for 5.25~5.35GHz 1.70dBi for 5.47~5.725GHz

Note: The antenna of EUT is conform to FCC 15.203

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
Channel 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz		

802.11n-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz	Channel 54:	5270 MHz	Channel 62:	5310 MHz
Channel 102:	5510 MHz	Channel 110:	5550 MHz	Channel 118:	5590 MHz	Channel 126:	5630 MHz
Channel 134:	5670 MHz						

802.11ac-20MHz Center Working Frequency of Each Channel:

Channel	Frequency
Channel 144:	5720 MHz

802.11ac-40MHz Center Working Frequency of Each Channel:

Channel	Frequency
Channel 142:	5710 MHz

802.11ac-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 42:	5210 MHz	Channel 58:	5290 MHz	Channel 106:	5530 MHz	Channel 138:	5690 MHz

Note:

1. This device is a Intel® Dual Band Wireless-AC 3160, including an IEEE 802.11 a/n/ac 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. (802.11a 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. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
5. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure 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 (802.11a-6Mbps) Mode 2: Transmit (802.11n-20BW 7.2Mbps) Mode 3: Transmit (802.11n-40BW 15Mbps) Mode 4: Transmit (802.11ac-20BW-7.2Mbps) Mode 5: Transmit (802.11ac-40BW-15Mbps) Mode 6: Transmit (802.11ac-80BW-32.5Mbps)
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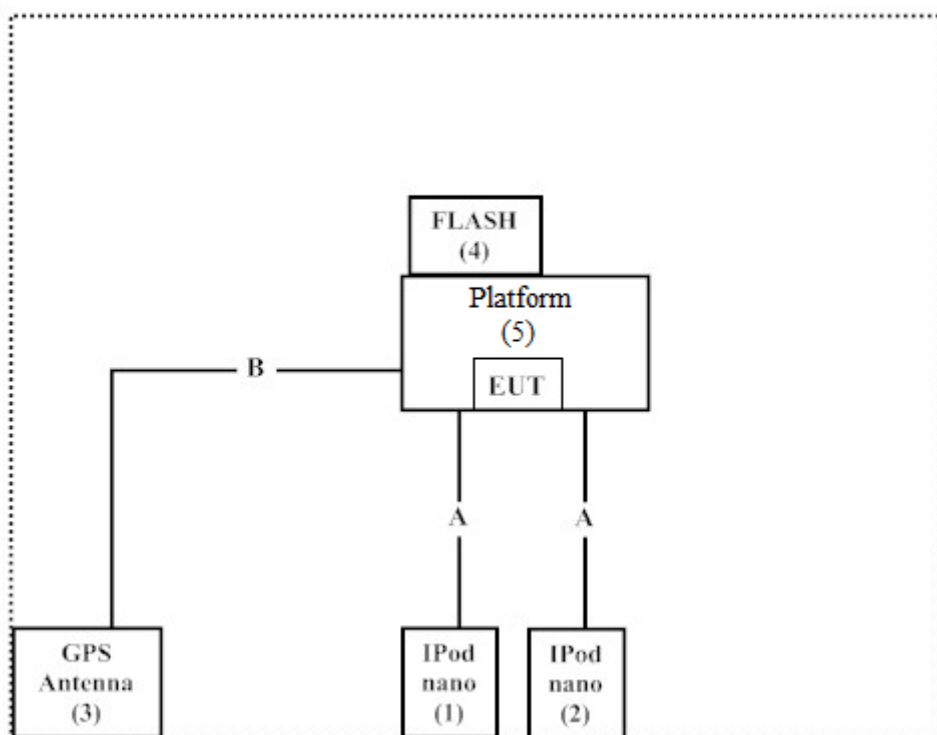
1.3. Tested System Details

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. Maximun conducted output power

2.1. Test Equipment

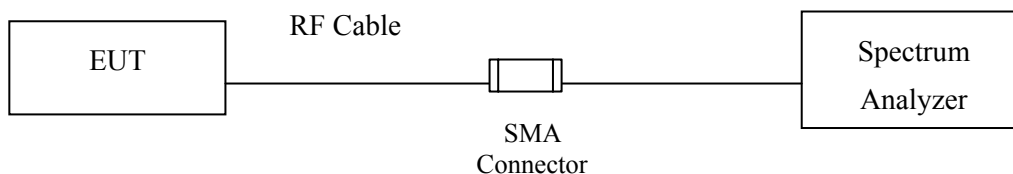
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2015
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

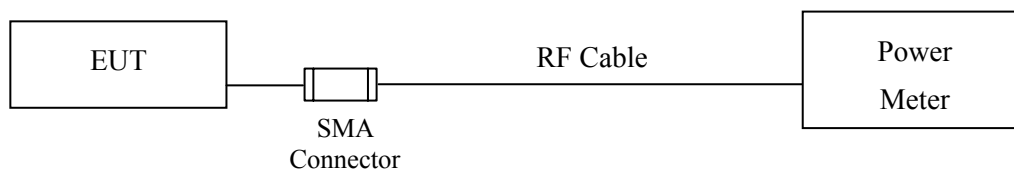
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

2.2. Test Setup

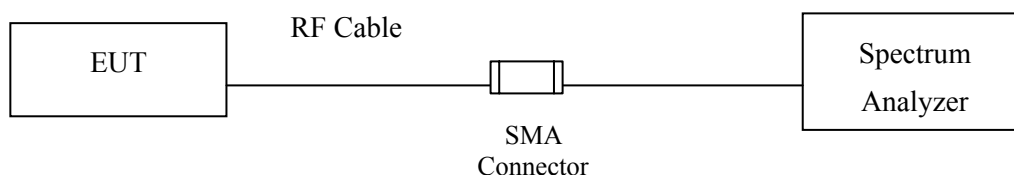
26dBc Occupied Bandwidth



Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



2.3. Limits

- (1) For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or $4 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (2) For the band 5.25-5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1W or $17 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

2.4. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater than 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW $\leq 40\text{MHz}$) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D01 section F) procedure is used for measurements.

2.5. Uncertainty

$\pm 1.27 \text{ dB}$

2.6. Test Result of Maximum conducted output power

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	15.52	--	--	--	--	--	--	--	<17dBm
44	5220	15.97	15.85	15.71	15.59	15.46	15.33	15.29	15.17	<17dBm
48	5240	15.77	--	--	--	--	--	--	--	<17dBm
52	5260	16.89	--	--	--	--	--	--	--	<24dBm
60	5300	16.91	16.81	16.69	16.58	16.46	16.34	16.23	16.18	<24dBm
64	5320	14.69	--	--	--	--	--	--	--	<24dBm
100	5500	14.12	--	--	--	--	--	--	--	<24dBm
116	5580	16.45	16.32	16.2	16.09	15.97	15.86	15.74	15.61	<24dBm
140	5700	13.54	--	--	--	--	--	--	--	<24dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
36	5180	28.900	15.52	17	25.61
44	5220	29.000	15.97	17	25.62
48	5240	28.900	15.77	17	25.61
52	5260	28.400	16.89	24	25.53
60	5300	30.500	16.91	24	25.84
64	5320	25.900	14.69	24	25.13
100	5500	25.900	14.12	24	25.13
116	5580	31.500	16.45	24	25.98
140	5700	26.200	13.54	24	25.18

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

Product : Intel® Dual Band Wireless-AC 3160
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps)

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	
		Measurement Level (dBm)								
36	5180	16.13	--	--	--	--	--	--	--	<17dBm
44	5220	16.24	16.12	16.01	15.88	15.74	15.62	15.5	15.39	<17dBm
48	5240	16.11	--	--	--	--	--	--	--	<17dBm
52	5260	16.99	--	--	--	--	--	--	--	<24dBm
60	5300	17.02	16.92	16.86	16.79	16.71	16.65	16.57	16.51	<24dBm
64	5320	14.6	--	--	--	--	--	--	--	<24dBm
100	5500	14.2	--	--	--	--	--	--	--	<24dBm
116	5580	16.55	16.43	16.3	16.17	16.05	15.93	15.87	15.8	<24dBm
140	5700	13.31	--	--	--	--	--	--	--	<24dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
36	5180	28.700	16.13	17	25.58
44	5220	29.700	16.24	17	25.73
48	5240	30.700	16.11	17	25.87
52	5260	31.500	16.99	24	25.98
60	5300	32.900	17.02	24	26.17
64	5320	27.100	14.6	24	25.33
100	5500	27.500	14.2	24	25.39
116	5580	32.900	16.55	24	26.17
140	5700	26.900	13.31	24	25.30

Maximum conducted output power Measurement:

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

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps)

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		15	30	45	60	90	120	135	150	
		Measurement Level (dBm)								
38	5190	13.11	--	--	--	--	--	--	--	<17dBm
46	5230	16.29	16.20	16.09	15.98	15.89	15.77	15.70	15.58	<17dBm
54	5270	13.22	--	--	--	--	--	--	--	<24dBm
62	5310	13.97	--	--	--	--	--	--	--	<24dBm
102	5510	11.17	--	--	--	--	--	--	--	<24dBm
110	5550	16.29	16.21	16.08	15.96	15.90	15.78	15.69	15.57	<24dBm
134	5670	16.03	--	--	--	--	--	--	--	<24dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

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

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
38	5190	23.500	13.11	17	24.71
46	5230	29.000	16.29	17	25.62
54	5270	43.200	13.22	24	27.35
62	5310	42.700	13.97	24	27.30
102	5510	41.500	11.17	24	27.18
110	5550	47.700	16.29	24	27.79
134	5670	50.100	16.03	24	28.00

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps)

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	15	11.72	11.6	11.53	11.3	11.25	11.11	10.99	10.93	<24dBm
144 (Band4)	5720	10.00	9.95	9.89	9.84	9.78	9.73	9.67	9.62	9.56	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

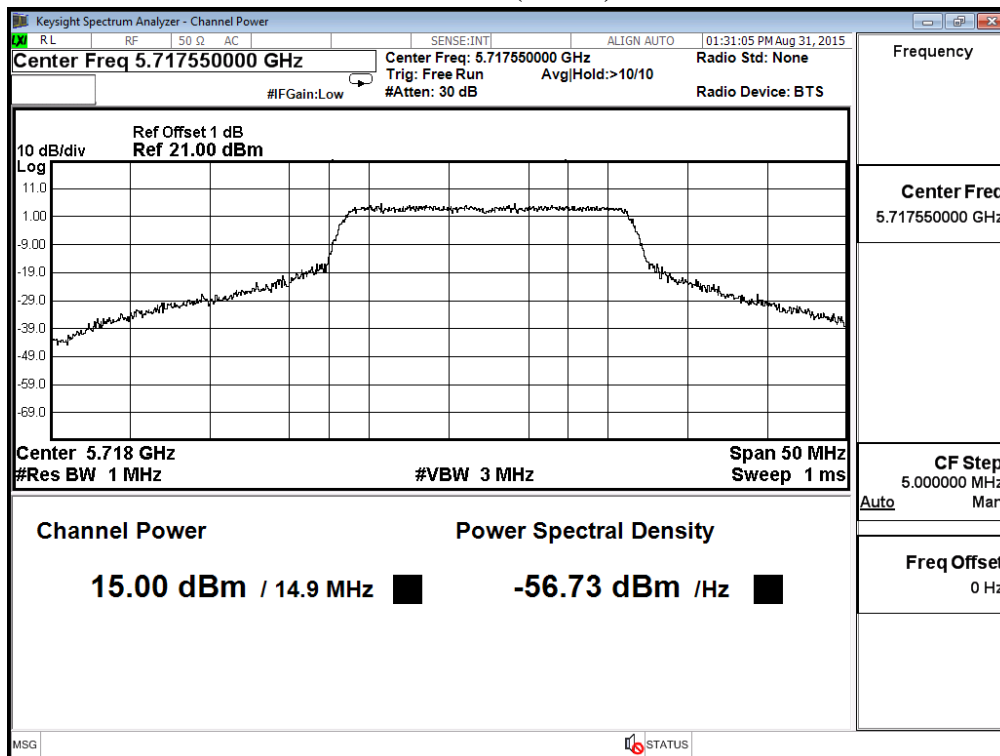
Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Output Power (dBm)	Output Power Limit	
					(dBm)	dBm+10log(BW)
144(Band3)	5720	14.900	15.00	15.00	24	24.48
144(Band4)	5720	4.520	10.00	10.00	30	21.61

Maximum conducted output power Measurement:

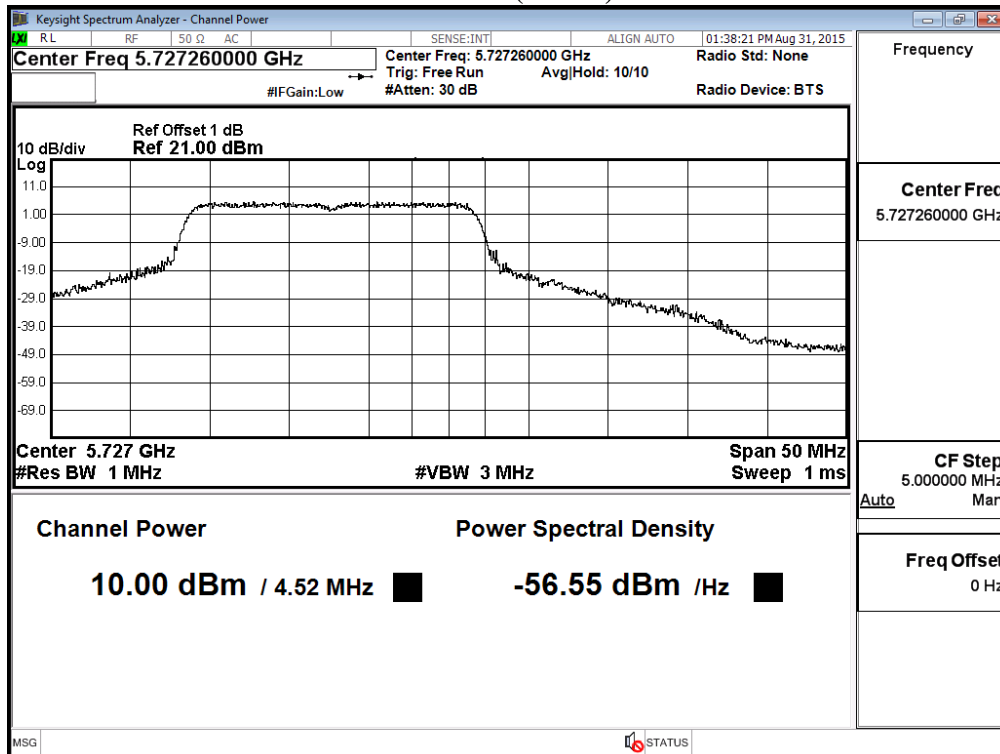
Note: Power Output Value =Reading value on average power meter + cable loss

Maximum conducted output power:

Channel 144 (Band3)



Channel 144 (Band4)



Product : Intel® Dual Band Wireless-AC 3160
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps)

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH9	VTH8	VTH7	VTH6	VTH5	VTH4	VTH3	VTH2	VTH1		
142F(Band3)	5710	15.55	12.75	12.6	12.44	12.32	12.28	12.05	11.97	11.84		<24dBm
142F(Band4)	5710	3.12	3.06	3.00	2.94	2.88	2.82	2.76	2.70	2.64		<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

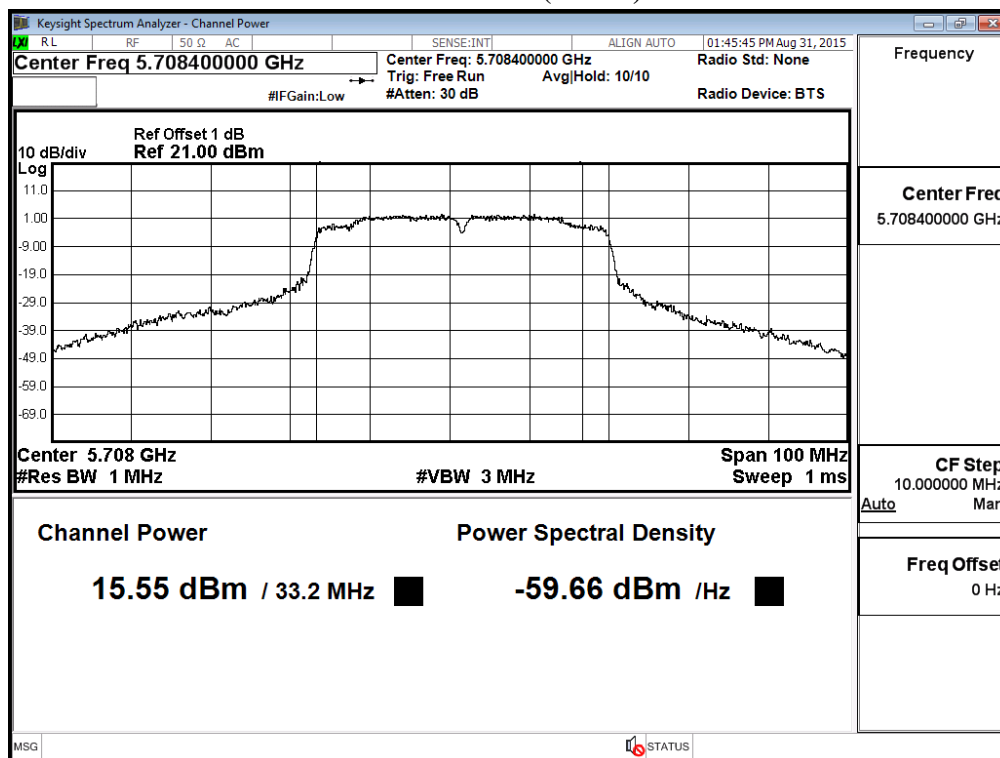
Maximum conducted output power Measurement:

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Output Power (dBm)	Output Power Limit	
					(dBm)	dBm+10log(BW)
142F(Band3)	5710	33.200	15.55	15.55	24	26.99
142F(Band4)	5710	3.283	3.12	3.12	30	19.39

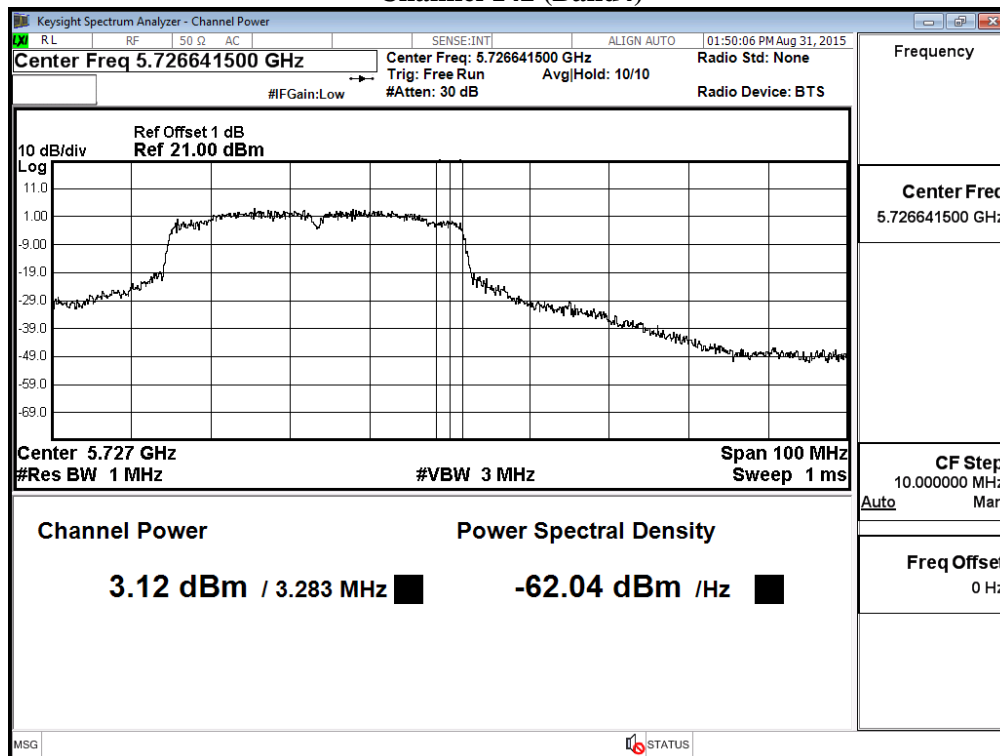
Note: Power Output Value =Reading value on average power meter + cable loss

Maximum conducted output power:

Channel 142 (Band3)



Channel 142 (Band4)



Product : Intel® Dual Band Wireless-AC 3160
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps)

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH9	VTH8	VTH7	VTH6	VTH5	VTH4	VTH3	VTH2	VTH1	VTH0	
42	5210	10.69	10.16	10.12	9.96	9.87	9.74	9.58	9.47	9.39	9.29	<17dBm
58	5290	12.32	12.26	12.2	12.14	12.08	12.02	11.96	11.9	11.84	11.78	<24dBm
106	5530	9.32	9.2	9.08	8.96	8.84	8.72	8.6	8.48	8.36	8.24	<24dBm
138(Band3)	5690	14.71	14.55	14.39	14.23	14.07	13.91	13.75	13.59	13.43	13.27	<24dBm
138(Band4)	5690	-2.63	-2.70	-2.83	-2.95	-3.05	-3.11	-3.19	-3.28	-3.37	-3.46	<30dBm

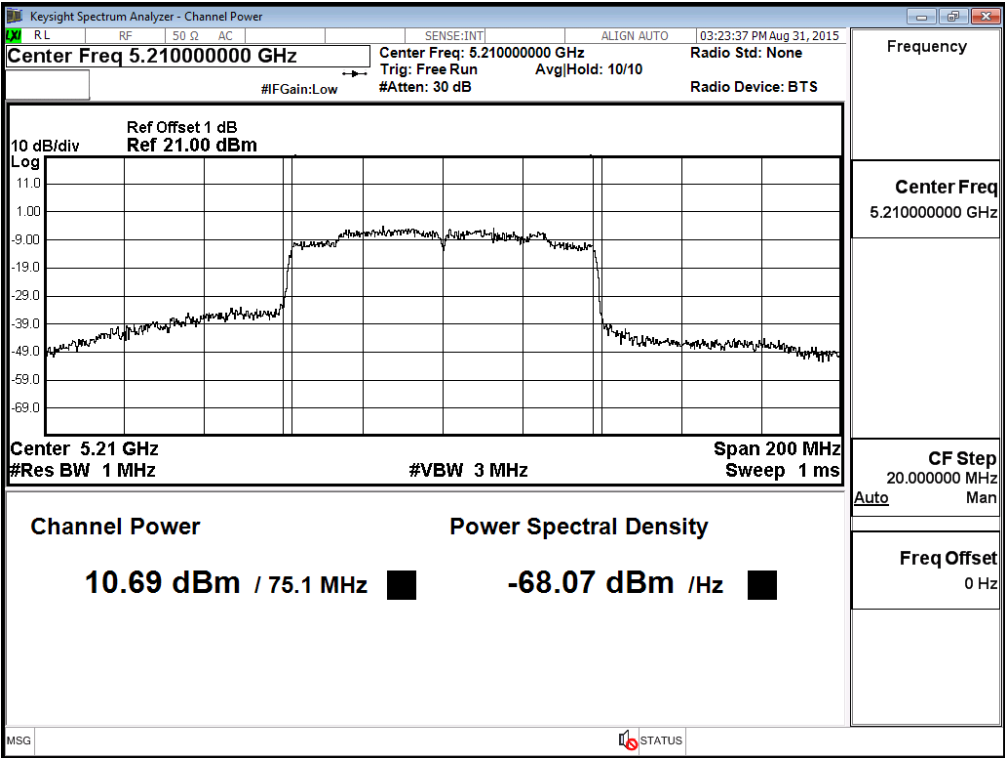
Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

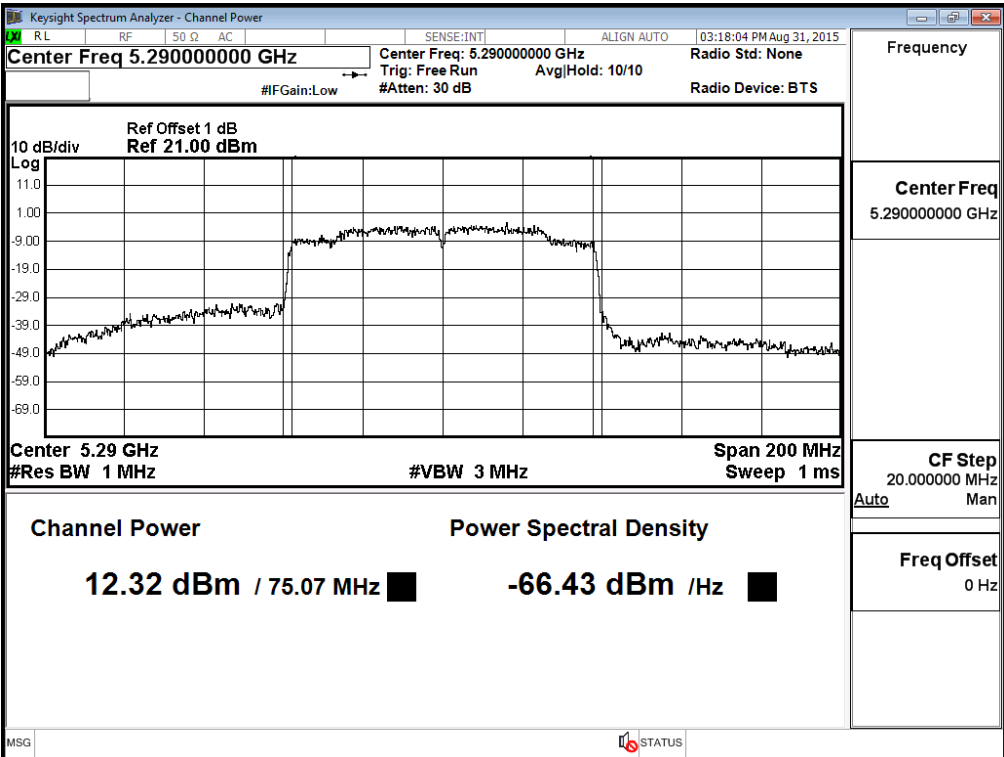
Note: Power Output Value =Reading value on average power meter + cable loss

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Output Power (dBm)	Output Power Limit	
					(dBm)	dBm+10log(BW)
42	5210	75.100	10.69	10.69	17	30.00
58	5290	75.070	12.32	12.32	24	30.25
106	5530	74.850	9.32	9.32	24	30.00
138(Band3)	5690	72.800	14.71	14.71	24	30.18
138(Band4)	5690	2.352	-2.63	-2.63	30	24.16

Maximum conducted output power:
Channel 42

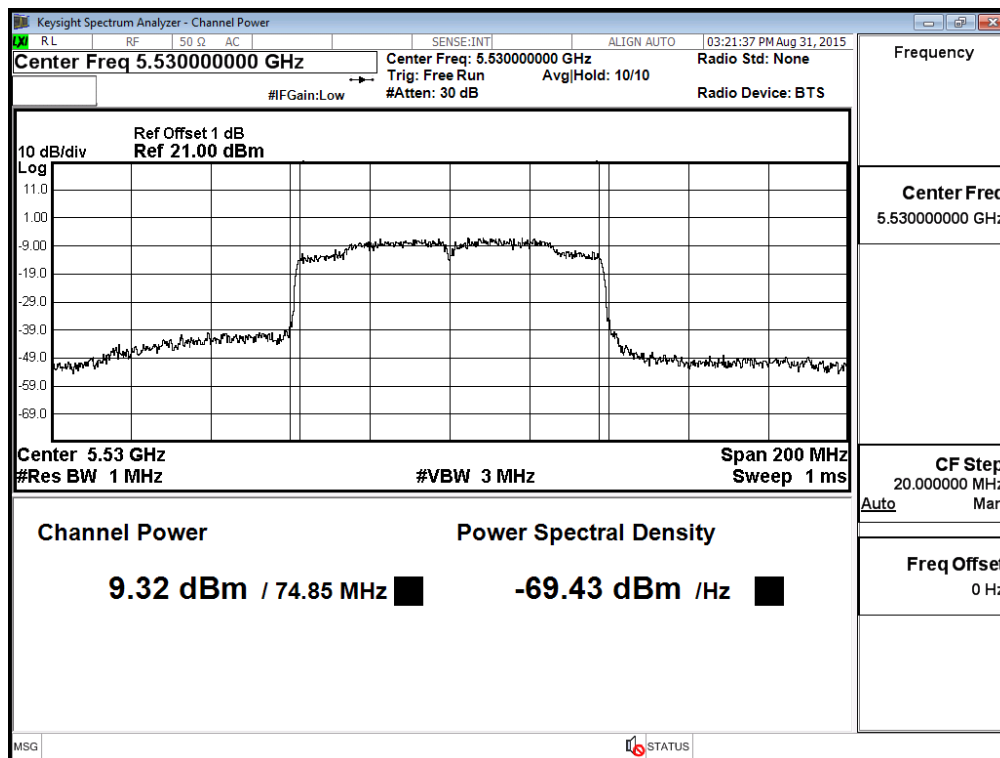


Maximum conducted output power:
Channel 58



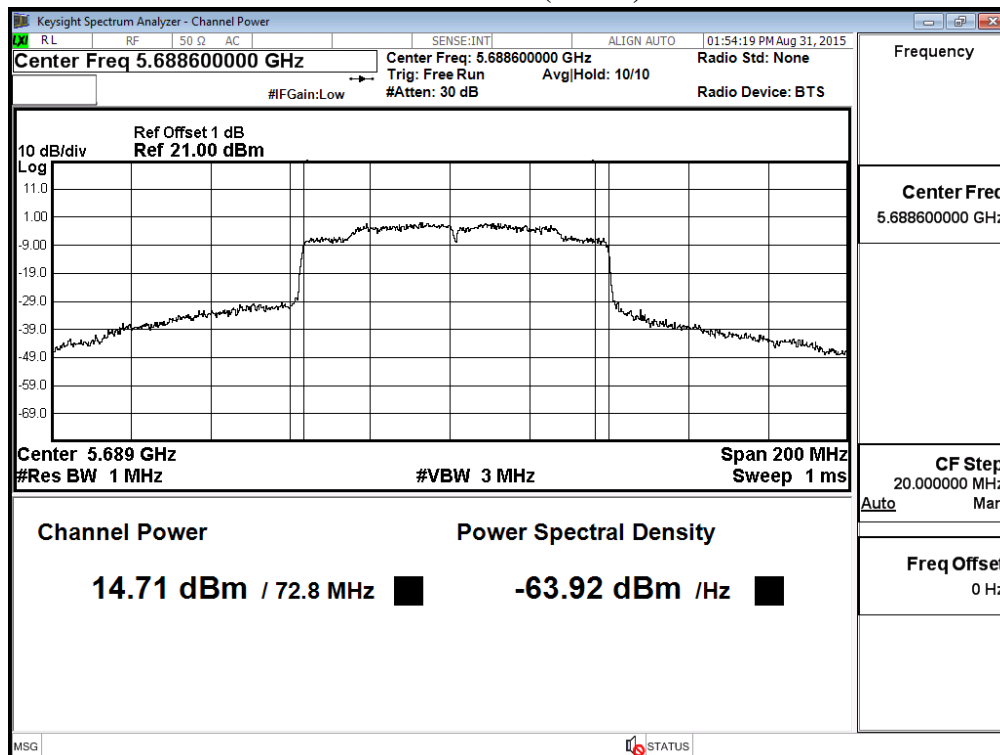
Maximum conducted output power:

Channel 106

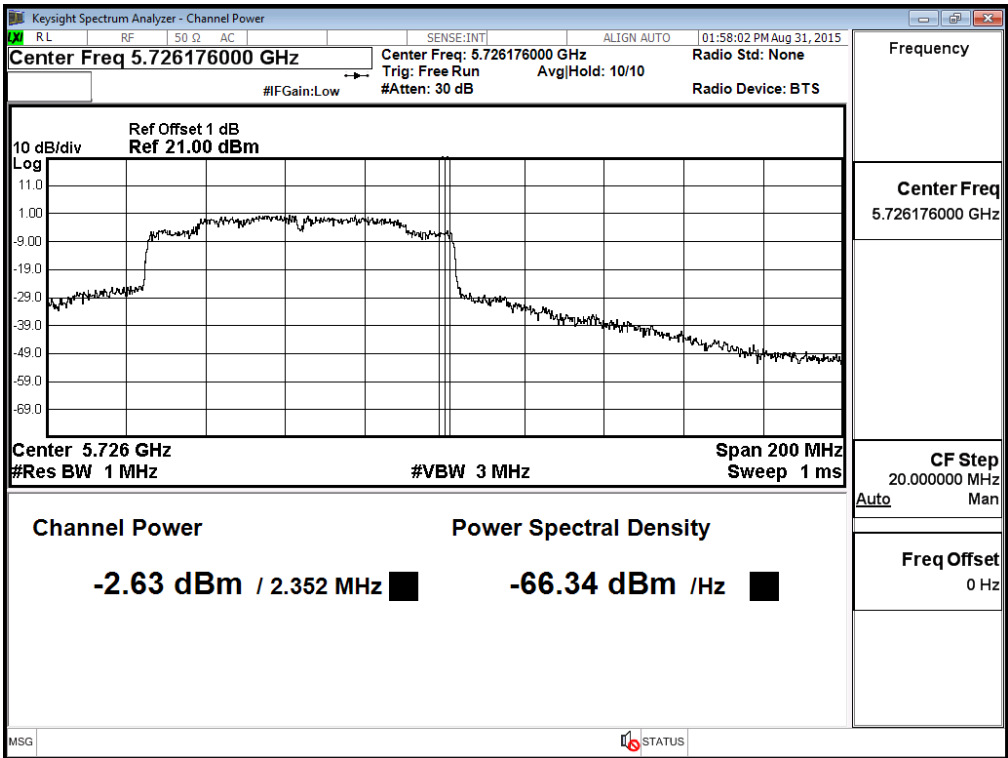


Maximum conducted output power:

Channel 138 (Band3)



Maximum conducted output power:
 Channel 138 (Band4)



3. Radiated Emission

3.1. Test Equipment

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

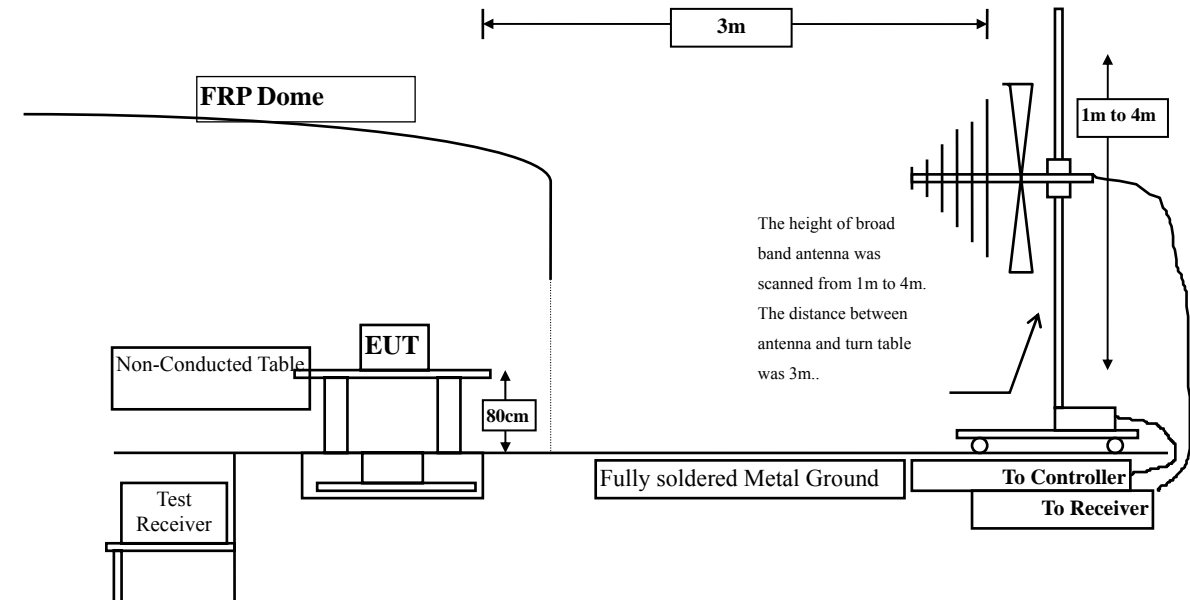
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
<input checked="" type="checkbox"/> Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep., 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun., 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun., 2015
	X	Coaxial Cable	QTK(Arnist)	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.
<input checked="" type="checkbox"/> 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

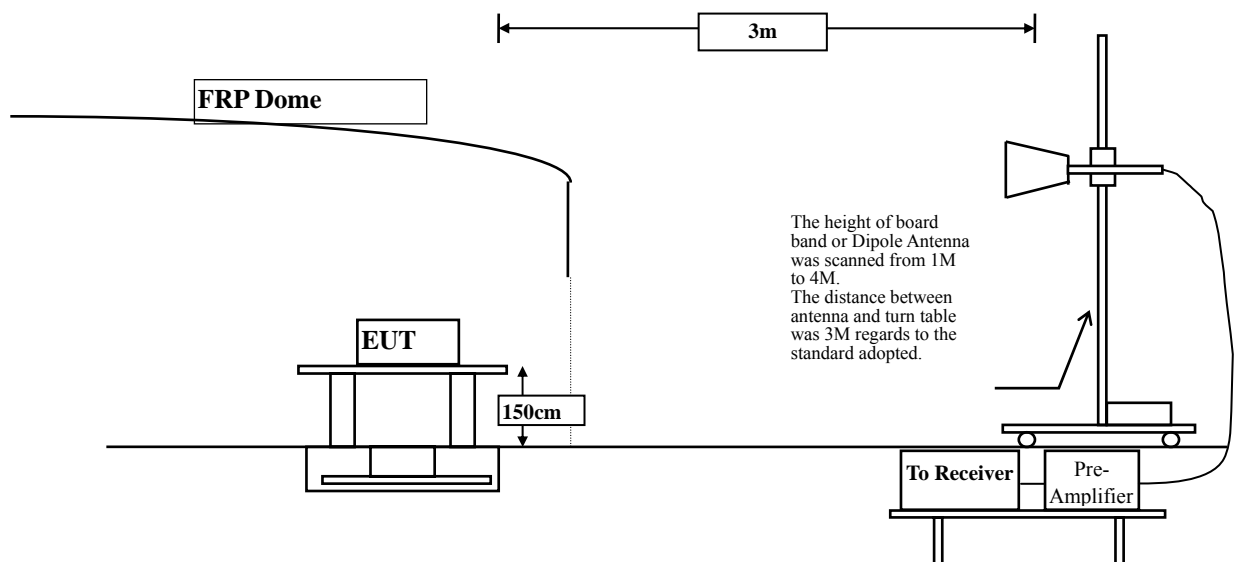
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with "X" are used to measure the final test results.

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	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

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 FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 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 from 9kHz - 10th Harmonic of fundamental was investigated.

3.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 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 (802.11a-6Mbps) (5180MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10360.000	10.540	39.870	50.410	-23.590	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10360.000	12.044	39.910	51.953	-22.047	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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 (802.11a-6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10440.000	9.649	39.460	49.108	-24.892	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10440.000	11.429	40.170	51.598	-22.402	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	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 (802.11a-6Mbps) (5240MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10480.000	10.166	39.680	49.846	-24.154	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10480.000	12.101	40.310	52.411	-21.589	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	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 (802.11a-6Mbps) (5260MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10520.000	11.021	39.510	50.531	-23.469	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10520.000	12.931	39.980	52.911	-21.089	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	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 (802.11a-6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10600.000	11.868	38.760	50.628	-23.372	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10600.000	13.403	39.580	52.983	-21.017	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	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 (802.11a-6Mbps) (5320MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10640.000	11.844	38.790	50.634	-23.366	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10640.000	13.517	39.110	52.627	-21.373	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	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 (802.11a-6Mbps) (5500MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11000.000	12.392	38.620	51.012	-22.988	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11000.000	14.514	39.010	53.524	-20.476	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	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 (802.11a-6Mbps) (5580MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11160.000	12.201	38.910	51.111	-22.889	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11160.000	14.445	39.340	53.785	-20.215	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	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 (802.11a-6Mbps) (5700MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11400.000	13.372	38.530	51.902	-22.098	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11400.000	14.922	38.930	53.852	-20.148	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5180MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10360.000	10.540	38.860	49.400	-24.600	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10360.000	12.044	39.510	51.553	-22.447	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10440.000	9.649	39.110	48.758	-25.242	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10440.000	11.429	39.360	50.788	-23.212	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5240MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10480.000	10.166	39.210	49.376	-24.624	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10480.000	12.101	39.840	51.941	-22.059	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5260MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10520.000	11.021	39.080	50.101	-23.899	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10520.000	12.931	39.460	52.391	-21.609	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10600.000	11.868	38.710	50.578	-23.422	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10600.000	13.403	39.280	52.683	-21.317	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5320MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10640.000	11.844	38.970	50.814	-23.186	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10640.000	13.517	39.340	52.857	-21.143	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5500MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
11000.000	12.392	38.410	50.802	-23.198	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11000.000	14.514	39.160	53.674	-20.326	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5580MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11160.000	12.201	38.210	50.411	-23.589	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11160.000	14.445	39.220	53.665	-20.335	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	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 (802.11n-20BW 7.2Mbps) (5700MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11400.000	13.372	38.690	52.062	-21.938	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11400.000	14.922	38.830	53.752	-20.248	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5190MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10380.000	10.164	38.570	48.734	-25.266	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10380.000	11.729	39.290	51.020	-22.980	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5230MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
10460.000	9.786	38.730	48.516	-25.484	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10460.000	11.644	39.560	51.204	-22.796	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5270MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10540.000	11.479	38.710	50.189	-23.811	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10540.000	13.289	39.430	52.719	-21.281	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5310MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10620.000	11.862	38.720	50.582	-23.418	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10620.000	13.449	39.030	52.479	-21.521	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5510MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
11020.000	12.632	37.980	50.612	-23.388	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11020.000	14.778	38.730	53.508	-20.492	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5550MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11100.000	12.305	38.430	50.735	-23.265	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11100.000	14.559	38.710	53.269	-20.731	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	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 (802.11n-40BW 15Mbps) (5670MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
11340.000	12.852	38.410	51.261	-22.739	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11340.000	14.594	39.250	53.844	-20.156	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	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 (802.11ac-20BW-7.2Mbps) (5720MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11440.000	13.997	37.630	51.627	-22.373	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11440.000	15.527	37.830	53.357	-20.643	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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 (802.11ac-40BW-15Mbps) (5710MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11420.000	13.675	37.530	51.204	-22.796	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11420.000	15.210	38.370	53.580	-20.420	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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 (802.11ac-80BW-32.5Mbps) (5210MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10420.000	9.711	38.890	48.602	-25.398	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10420.000	11.415	39.470	50.885	-23.115	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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 (802.11ac-80BW-32.5Mbps) (5290MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10580.000	11.823	39.170	50.994	-23.006	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10580.000	13.426	39.720	53.146	-20.854	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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 (802.11ac-80BW-32.5Mbps) (5530MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11060.000	12.824	38.140	50.964	-23.036	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11060.000	15.026	38.810	53.836	-20.164	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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 (802.11ac-80BW-32.5Mbps) (5690MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11380.000	13.200	37.380	50.580	-23.420	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11380.000	14.808	38.240	53.048	-20.952	74.000
11550.000	*	*	*	*	74.000
17325.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	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
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector					
61.040	-12.057	48.443	36.386	-3.614	40.000
146.400	-7.756	46.678	38.922	-4.578	43.500
303.540	-4.068	45.521	41.453	-4.547	46.000
398.600	0.879	41.956	42.835	-3.165	46.000
600.360	3.472	31.912	35.384	-10.616	46.000
875.840	5.816	35.292	41.108	-4.892	46.000
Vertical					
Peak Detector					
61.040	-12.057	47.694	35.637	-4.363	40.000
107.600	-7.597	40.584	32.987	-10.513	43.500
299.660	-4.751	38.845	34.094	-11.906	46.000
499.480	1.991	31.902	33.892	-12.108	46.000
734.220	3.155	29.589	32.745	-13.255	46.000
875.840	5.816	33.315	39.131	-6.869	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
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
68.800	-14.673	51.350	36.677	-3.323	40.000
142.520	-7.627	45.628	38.001	-5.499	43.500
307.420	-4.120	46.220	42.100	-3.900	46.000
398.600	0.879	41.526	42.405	-3.595	46.000
666.320	1.879	32.905	34.784	-11.216	46.000
875.840	5.816	35.030	40.846	-5.154	46.000
Vertical					
Peak Detector					
66.860	-12.435	48.649	36.214	-3.786	40.000
150.280	-5.350	39.285	33.935	-9.565	43.500
332.640	-2.255	34.163	31.908	-14.092	46.000
600.360	1.302	31.439	32.741	-13.259	46.000
730.340	-0.821	30.686	29.865	-16.135	46.000
875.840	0.516	34.454	34.970	-11.030	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
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
57.160	-11.836	46.983	35.147	-4.853	40.000
146.400	-7.756	46.286	38.530	-4.970	43.500
293.840	-4.940	45.820	40.880	-5.120	46.000
398.600	0.879	42.013	42.892	-3.108	46.000
600.360	3.472	32.346	35.818	-10.182	46.000
875.840	5.816	35.535	41.351	-4.649	46.000
Vertical					
Peak Detector					
74.620	-7.726	44.225	36.499	-3.501	40.000
299.660	-4.061	37.743	33.682	-12.318	46.000
499.480	-0.199	30.893	30.693	-15.307	46.000
600.360	1.302	31.880	33.182	-12.818	46.000
800.180	2.637	27.534	30.171	-15.829	46.000
932.100	3.430	29.792	33.222	-12.778	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
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
70.740	-15.658	51.381	35.723	-4.277	40.000
152.220	-7.926	44.264	36.338	-7.162	43.500
305.480	-3.836	46.524	42.688	-3.312	46.000
398.600	0.879	40.296	41.175	-4.825	46.000
666.320	1.879	33.771	35.650	-10.350	46.000
875.840	5.816	34.943	40.759	-5.241	46.000
Vertical					
Peak Detector					
109.540	-3.507	40.890	37.382	-6.118	43.500
299.660	-4.061	36.555	32.494	-13.506	46.000
600.360	1.302	30.789	32.091	-13.909	46.000
666.320	-0.951	32.881	31.930	-14.070	46.000
798.240	2.629	29.311	31.939	-14.061	46.000
875.840	0.516	34.015	34.531	-11.469	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
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
68.800	-14.673	50.304	35.631	-4.369	40.000
152.220	-7.926	46.655	38.729	-4.771	43.500
303.540	-4.068	46.007	41.939	-4.061	46.000
398.600	0.879	41.373	42.252	-3.748	46.000
666.320	1.879	33.773	35.652	-10.348	46.000
875.840	5.816	35.361	41.177	-4.823	46.000
Vertical					
Peak Detector					
68.800	-12.433	49.166	36.733	-3.267	40.000
113.420	-3.709	41.322	37.613	-5.887	43.500
297.720	-4.356	37.572	33.216	-12.784	46.000
600.360	1.302	31.604	32.906	-13.094	46.000
796.300	2.639	27.506	30.145	-15.855	46.000
875.840	0.516	34.055	34.571	-11.429	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
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5580MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
68.800	-14.673	50.951	36.278	-3.722	40.000
150.280	-7.870	47.199	39.329	-4.171	43.500
305.480	-3.836	46.624	42.788	-3.212	46.000
398.600	0.879	39.360	40.239	-5.761	46.000
800.180	6.417	28.807	35.224	-10.776	46.000
930.160	7.530	29.301	36.831	-9.169	46.000
Vertical					
Peak Detector					
61.040	-11.587	47.993	36.406	-3.594	40.000
109.540	-3.507	40.554	37.046	-6.454	43.500
328.760	-2.407	36.465	34.058	-11.942	46.000
600.360	1.302	33.347	34.649	-11.351	46.000
798.240	2.629	27.705	30.333	-15.667	46.000
875.840	0.516	34.078	34.594	-11.406	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
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5190MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
62.980	-12.319	47.100	34.781	-5.219	40.000
146.400	-7.756	46.768	39.012	-4.488	43.500
301.600	-4.465	47.206	42.741	-3.259	46.000
400.540	0.942	40.007	40.949	-5.051	46.000
666.320	1.879	32.249	34.128	-11.872	46.000
875.840	5.816	34.941	40.757	-5.243	46.000
Vertical					
Peak Detector					
62.980	-11.979	46.108	34.129	-5.871	40.000
111.480	-3.439	40.122	36.684	-6.816	43.500
299.660	-4.061	37.597	33.536	-12.464	46.000
499.480	-0.199	29.605	29.405	-16.595	46.000
666.320	-0.951	33.023	32.072	-13.928	46.000
875.840	0.516	33.859	34.375	-11.625	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
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5270MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
70.740	-15.658	51.694	36.036	-3.964	40.000
148.340	-7.806	46.313	38.507	-4.993	43.500
311.300	-4.651	45.858	41.207	-4.793	46.000
499.480	1.991	30.119	32.109	-13.891	46.000
666.320	1.879	32.074	33.953	-12.047	46.000
875.840	5.816	35.159	40.975	-5.025	46.000
Vertical					
Peak Detector					
61.040	-11.587	47.536	35.949	-4.051	40.000
111.480	-3.439	39.908	36.470	-7.030	43.500
332.640	-2.255	36.489	34.234	-11.766	46.000
600.360	1.302	31.793	33.095	-12.905	46.000
732.280	-0.833	28.949	28.116	-17.884	46.000
875.840	0.516	34.309	34.825	-11.175	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
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5550MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
68.800	-14.673	51.343	36.670	-3.330	40.000
146.400	-7.756	46.724	38.968	-4.532	43.500
305.480	-3.836	46.170	42.334	-3.666	46.000
398.600	0.879	41.916	42.795	-3.205	46.000
666.320	1.879	32.162	34.041	-11.959	46.000
875.840	5.816	34.824	40.640	-5.360	46.000
Vertical					
Peak Detector					
68.800	-12.433	48.550	36.117	-3.883	40.000
146.400	-5.456	36.978	31.522	-11.978	43.500
334.580	-2.253	33.487	31.234	-14.766	46.000
600.360	1.302	32.111	33.413	-12.587	46.000
800.180	2.637	29.313	31.950	-14.050	46.000
875.840	0.516	34.149	34.665	-11.335	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
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps) (5720MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
66.860	-13.595	49.729	36.134	-3.866	40.000
152.220	-7.926	42.106	34.180	-9.320	43.500
297.720	-4.756	44.276	39.520	-6.480	46.000
398.600	0.879	39.722	40.601	-5.399	46.000
710.940	3.784	34.579	38.362	-7.638	46.000
875.840	5.816	35.192	41.008	-4.992	46.000
Vertical					
Peak Detector					
66.860	-12.435	47.418	34.983	-5.017	40.000
150.280	-5.350	41.539	36.189	-7.311	43.500
336.520	-1.999	37.926	35.927	-10.073	46.000
499.480	-0.199	29.611	29.411	-16.589	46.000
666.320	-0.951	33.415	32.464	-13.536	46.000
875.840	0.516	34.910	35.426	-10.574	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
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps) (5710MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
64.920	-12.587	48.495	35.908	-4.092	40.000
146.400	-7.756	47.505	39.749	-3.751	43.500
289.960	-5.470	45.883	40.413	-5.587	46.000
398.600	0.879	40.981	41.860	-4.140	46.000
730.340	3.819	34.816	38.635	-7.365	46.000
875.840	5.816	34.544	40.360	-5.640	46.000
Vertical					
Peak Detector					
61.040	-11.587	48.496	36.909	-3.091	40.000
150.280	-5.350	42.406	37.056	-6.444	43.500
336.520	-1.999	39.623	37.624	-8.376	46.000
598.420	1.114	30.830	31.944	-14.056	46.000
732.280	-0.833	32.041	31.208	-14.792	46.000
875.840	0.516	35.913	36.429	-9.571	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
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
68.800	-14.673	51.224	36.551	-3.449	40.000
150.280	-7.870	47.852	39.982	-3.518	43.500
398.600	0.879	40.884	41.763	-4.237	46.000
730.340	3.819	32.783	36.602	-9.398	46.000
875.840	5.816	35.398	41.214	-4.786	46.000
1000.000	9.564	28.309	37.873	-16.127	54.000
Vertical					
Peak Detector					
68.800	-12.433	49.052	36.619	-3.381	40.000
148.340	-5.406	39.059	33.653	-9.847	43.500
336.520	-1.999	37.603	35.604	-10.396	46.000
499.480	-0.199	31.898	31.698	-14.302	46.000
732.280	-0.833	31.938	31.105	-14.895	46.000
875.840	0.516	36.809	37.325	-8.675	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
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
66.860	-13.595	49.326	35.731	-4.269	40.000
146.400	-7.756	46.278	38.522	-4.978	43.500
297.720	-4.756	45.492	40.736	-5.264	46.000
400.540	0.942	41.052	41.994	-4.006	46.000
728.400	3.841	29.267	33.107	-12.893	46.000
875.840	5.816	35.393	41.209	-4.791	46.000
Vertical					
Peak Detector					
68.800	-12.433	48.524	36.091	-3.909	40.000
148.340	-5.406	41.620	36.214	-7.286	43.500
336.520	-1.999	40.003	38.004	-7.996	46.000
499.480	-0.199	33.816	33.616	-12.384	46.000
732.280	-0.833	32.192	31.359	-14.641	46.000
875.840	0.516	37.156	37.672	-8.328	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
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5690MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
142.520	-7.627	45.488	37.861	-5.639	43.500
255.040	-5.409	42.789	37.380	-8.620	46.000
398.600	0.879	39.406	40.285	-5.715	46.000
666.320	1.879	32.732	34.611	-11.389	46.000
875.840	5.816	35.853	41.669	-4.331	46.000
1000.000	9.564	29.662	39.226	-14.774	54.000
Vertical					
Peak Detector					
68.800	-12.433	47.885	35.452	-4.548	40.000
113.420	-3.709	41.288	37.579	-5.921	43.500
336.520	-1.999	36.776	34.777	-11.223	46.000
499.480	-0.199	30.871	30.671	-15.329	46.000
600.360	1.302	30.061	31.363	-14.637	46.000
875.840	0.516	35.856	36.372	-9.628	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

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:

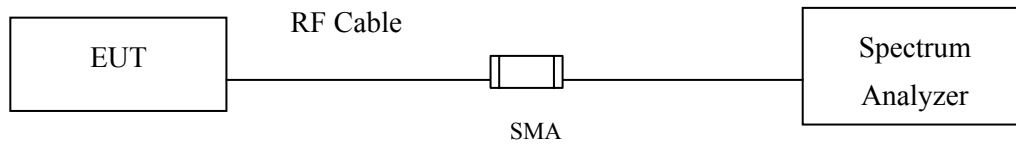
The following test equipments are used during the band edge tests:

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

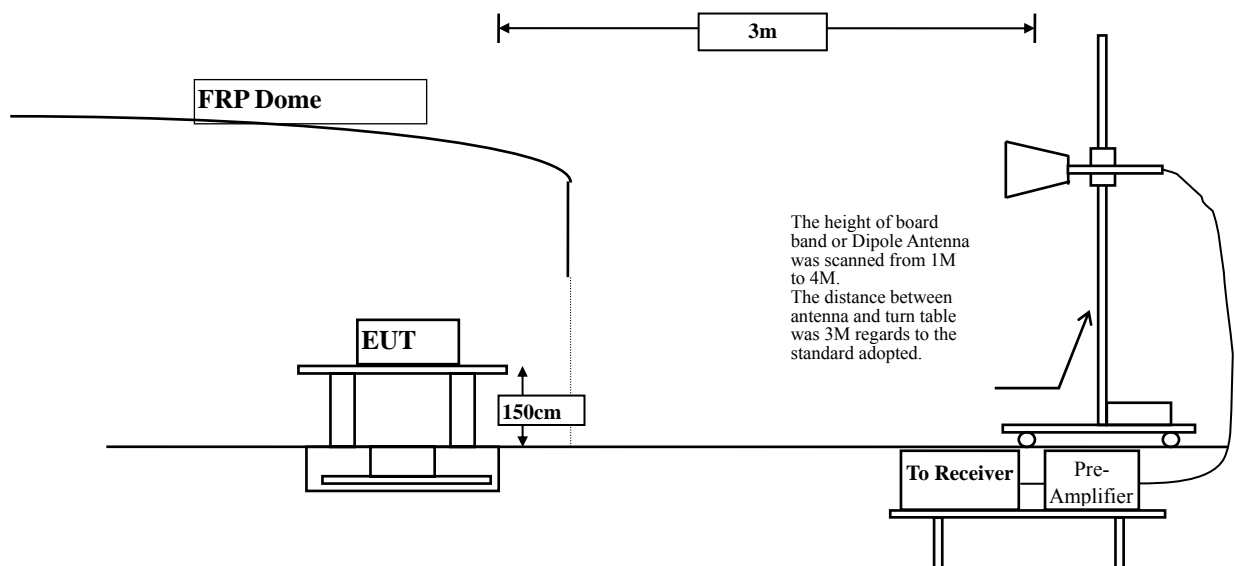
- Note:
1. All instruments are calibrated every one year.
 2. The test instruments marked by "X" are used to measure the final test results.

4.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



4.3. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

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 :

1. RF Voltage (dBμV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

4.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

4.6. Test Result of Band Edge

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36 (5180MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5150.000	3.340	53.683	57.023	74.00	54.00	Pass
36 (Peak)	5182.174	3.226	93.279	96.505	--	--	--
36 (Average)	5150.000	3.340	38.547	41.887	74.00	54.00	Pass
36 (Average)	5187.101	3.209	82.125	85.334	--	--	--

Figure Channel 36: Horizontal (Peak)

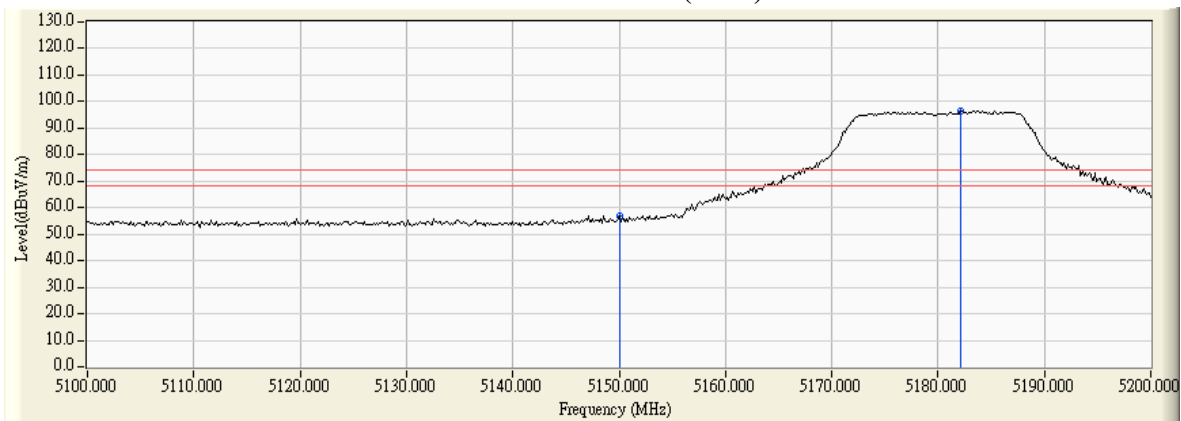
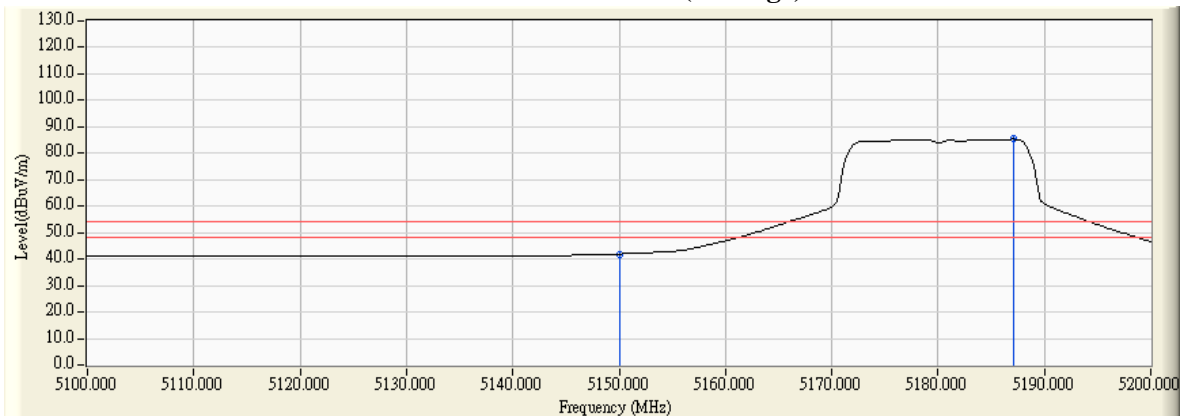


Figure Channel 36: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36 (5180MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5150.000	5.260	50.701	55.961	74.00	54.00	Pass
36 (Peak)	5182.319	5.348	92.945	98.293	--	--	--
36 (Average)	5150.000	5.260	38.298	43.558	74.00	54.00	Pass
36 (Average)	5187.101	5.361	81.577	86.938	--	--	--

Figure Channel 36: Vertical (Peak)

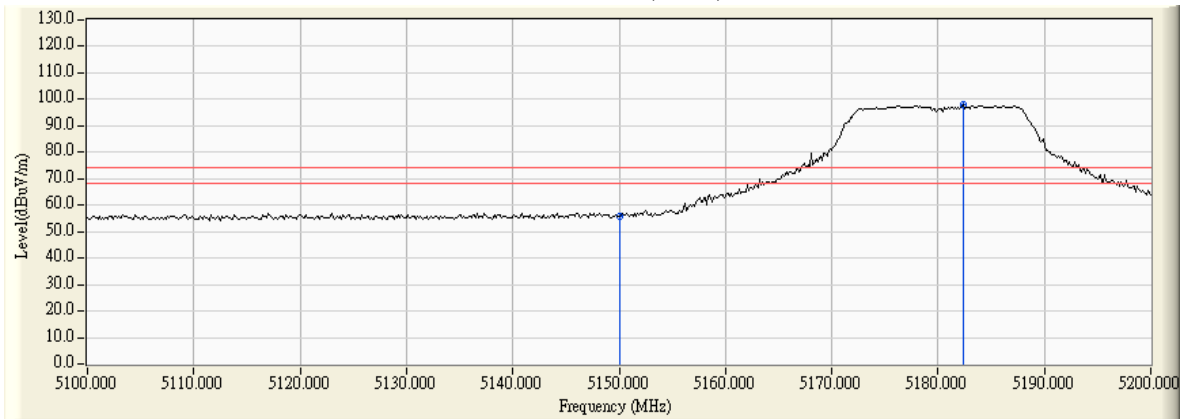
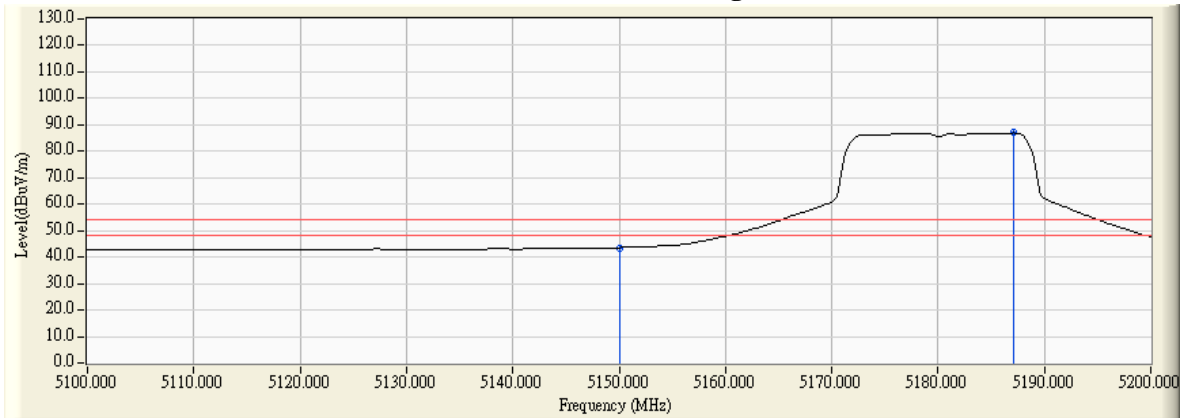


Figure Channel 36: Vertical (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 64 (5320MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
64 (Peak)	5316.377	3.823	88.833	92.657	--	--	--
64 (Peak)	5350.000	3.716	51.032	54.749	74.00	54.00	Pass
64 (Average)	5313.043	3.835	77.866	81.701	--	--	--
64 (Average)	5350.000	3.716	38.264	41.981	74.00	54.00	Pass

Figure Channel 64:

Horizontal (Peak)

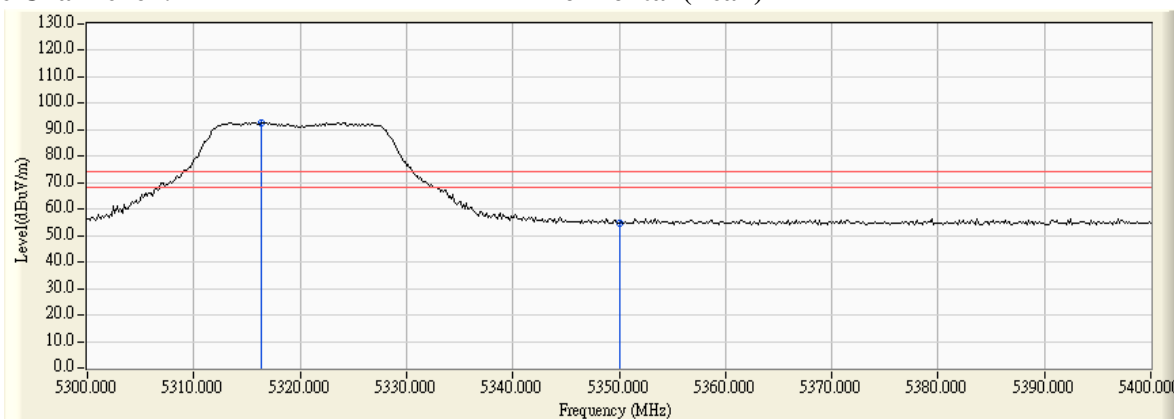
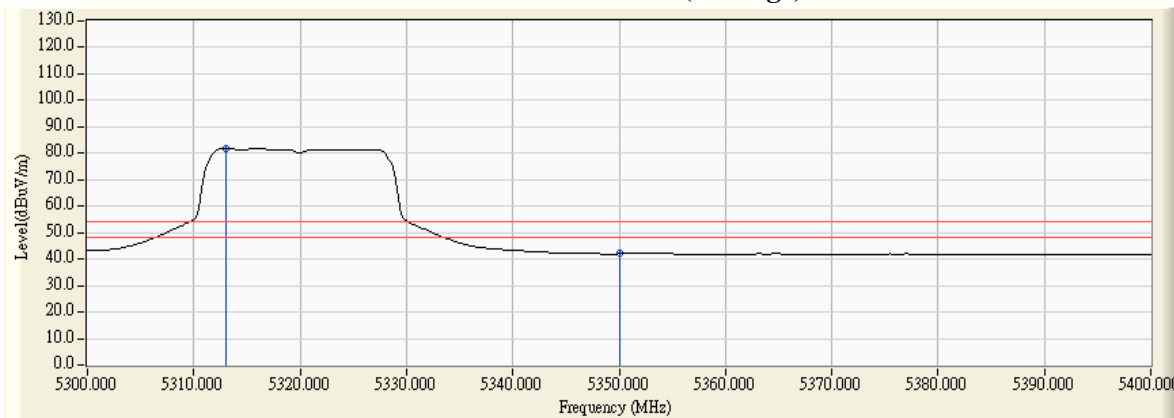


Figure Channel 64:

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 Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 64 (5320MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
64 (Peak)	5313.333	5.738	89.156	94.894	--	--	--
64 (Peak)	5350.000	5.691	51.566	57.258	74.00	54.00	Pass
64 (Average)	5312.899	5.739	78.245	83.983	--	--	--
64 (Average)	5350.000	5.691	38.199	43.891	74.00	54.00	Pass

Figure Channel 64:

Vertical (Peak)

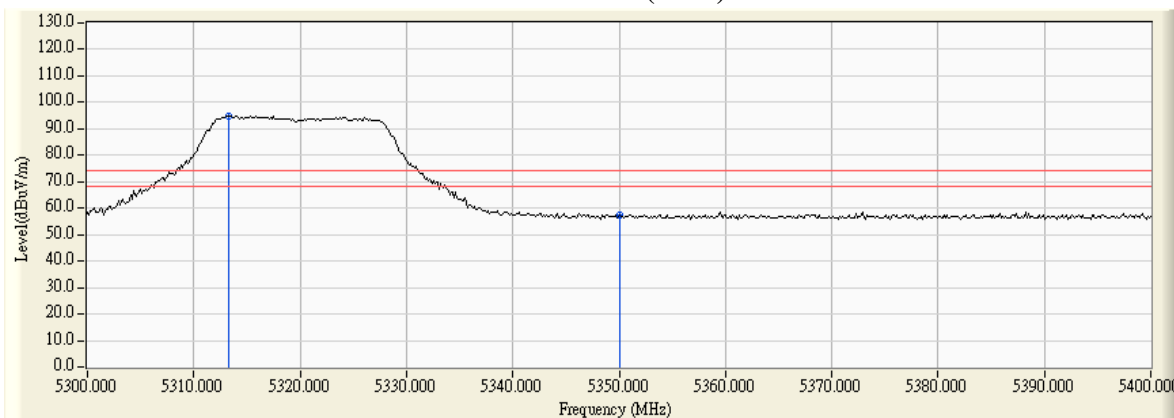
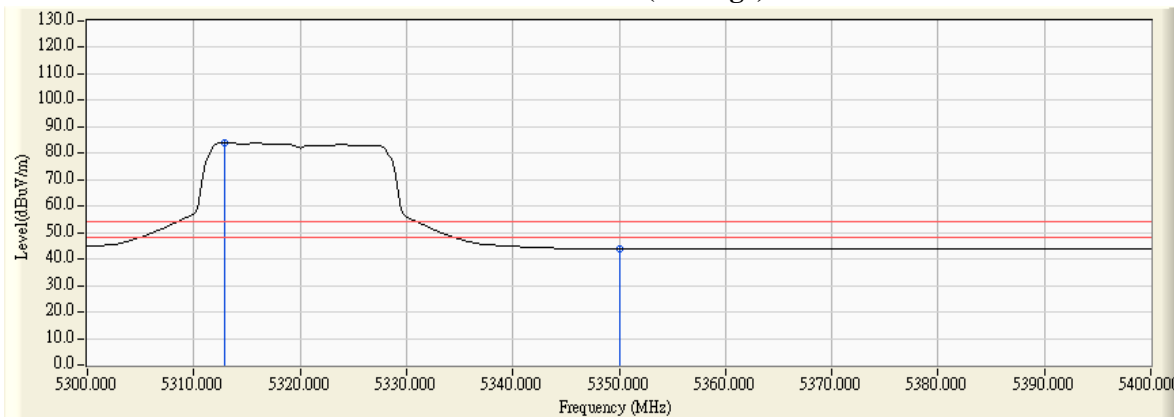


Figure Channel 64:

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 Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100 (5500MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
100 (Peak)	5460.000	4.354	51.184	55.538	74.00	54.00	Pass
100 (Peak)	5504.348	4.845	92.843	97.688	--	--	--
100 (Average)	5460.000	4.354	38.368	42.722	74.00	54.00	Pass
100 (Average)	5507.246	4.831	81.754	86.585	--	--	--

Figure Channel 100:

Horizontal (Peak)

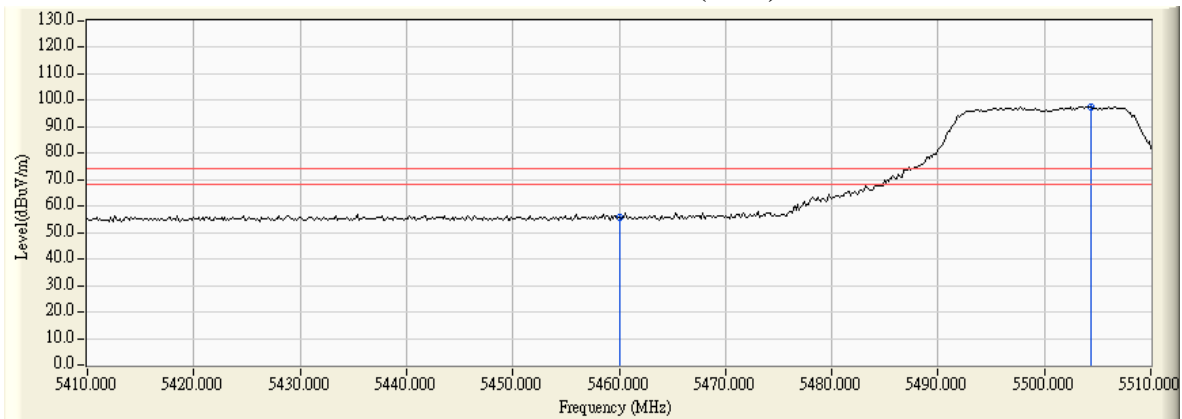
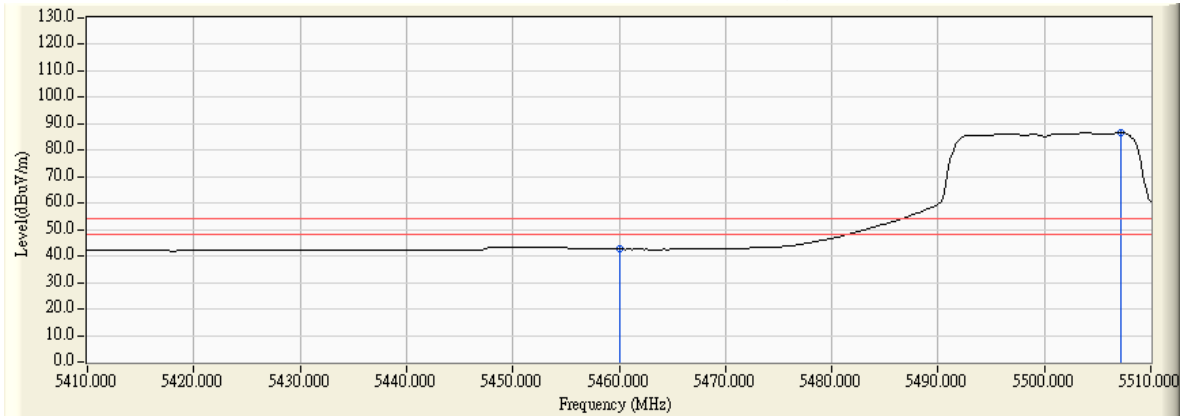


Figure Channel 100:

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 Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100 (5500MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
100 (Peak)	5460.000	6.041	50.327	56.368	74.00	54.00	Pass
100 (Peak)	5503.333	6.285	89.578	95.863	--	--	--
100 (Average)	5460.000	6.041	38.355	44.396	74.00	54.00	Pass
100 (Average)	5507.101	6.276	78.596	84.873	--	--	--

Figure Channel 100: Vertical (Peak)

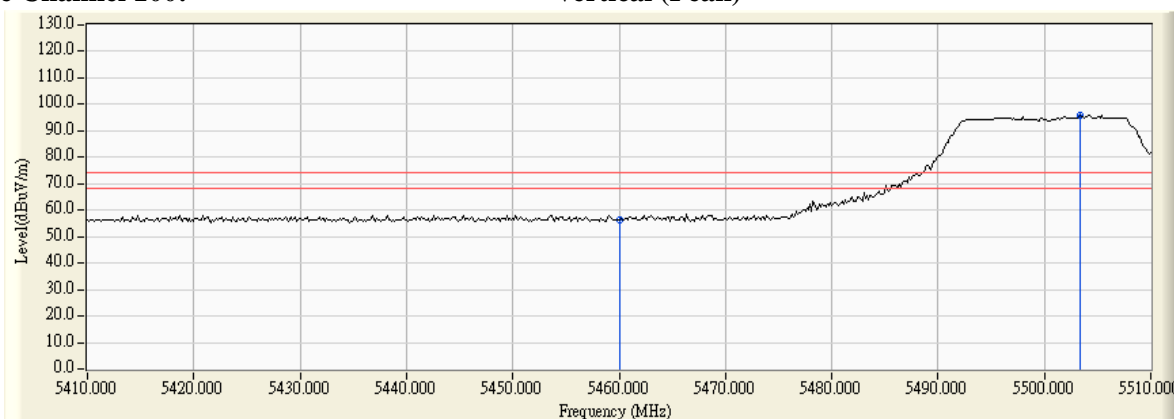
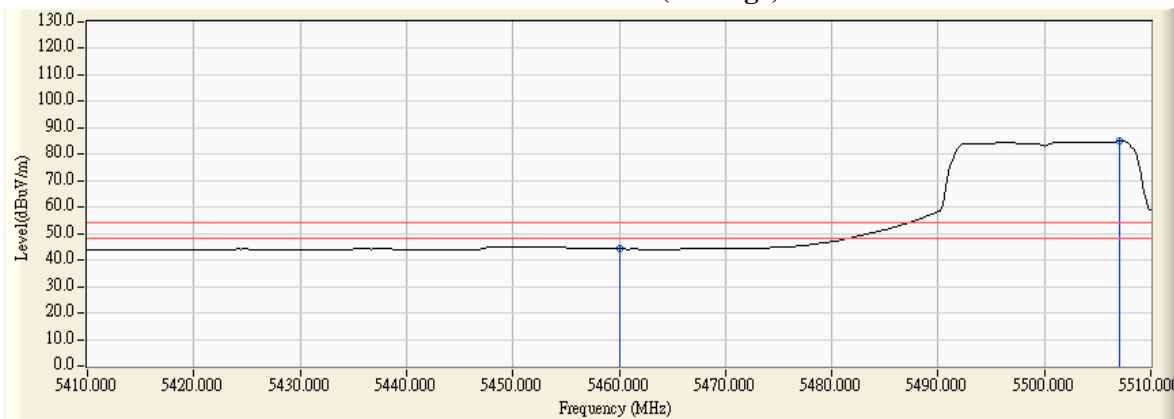


Figure Channel 100: Vertical (Average)

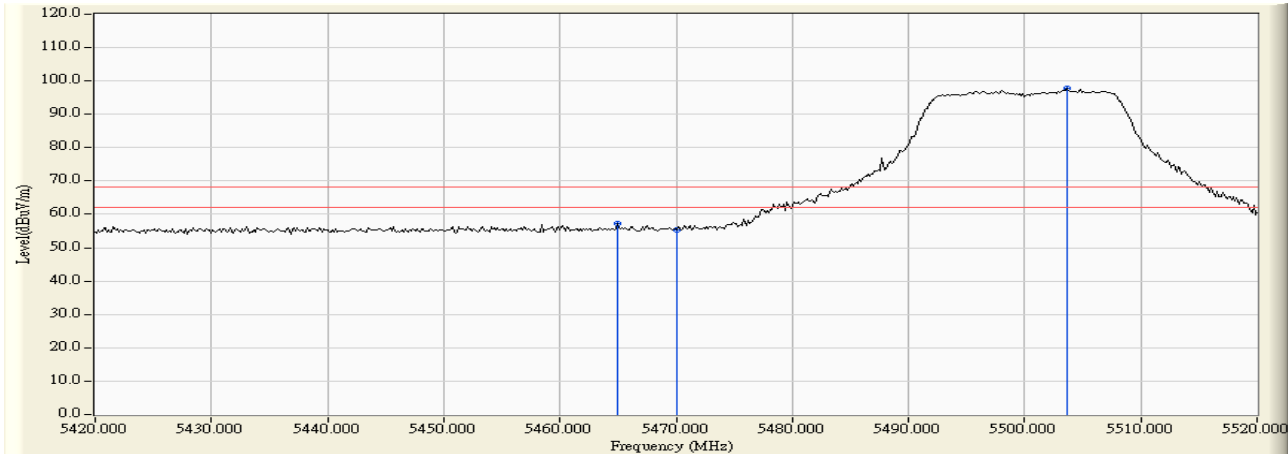


Note:

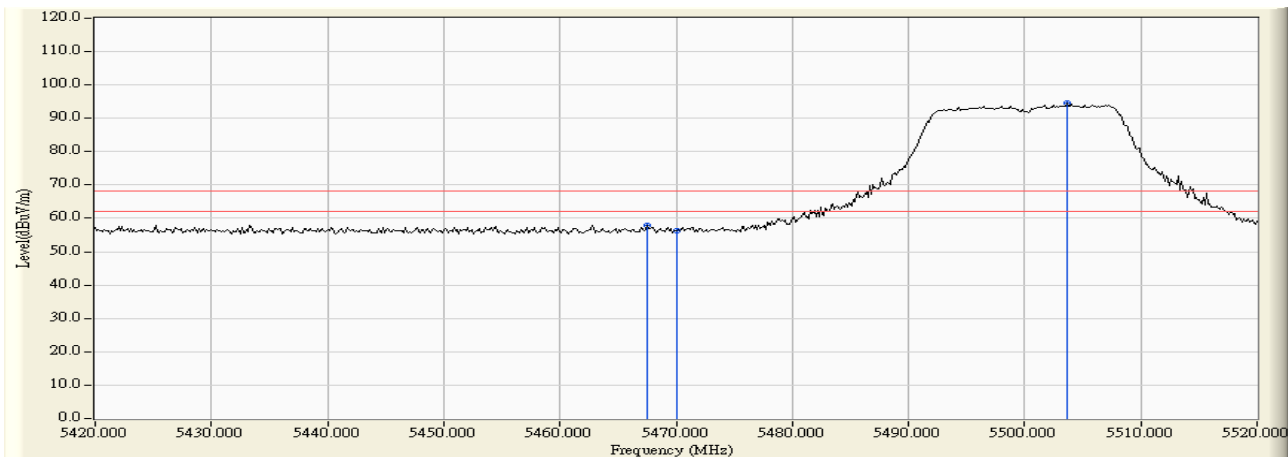
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading 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 Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

RF Radiated Measurement:



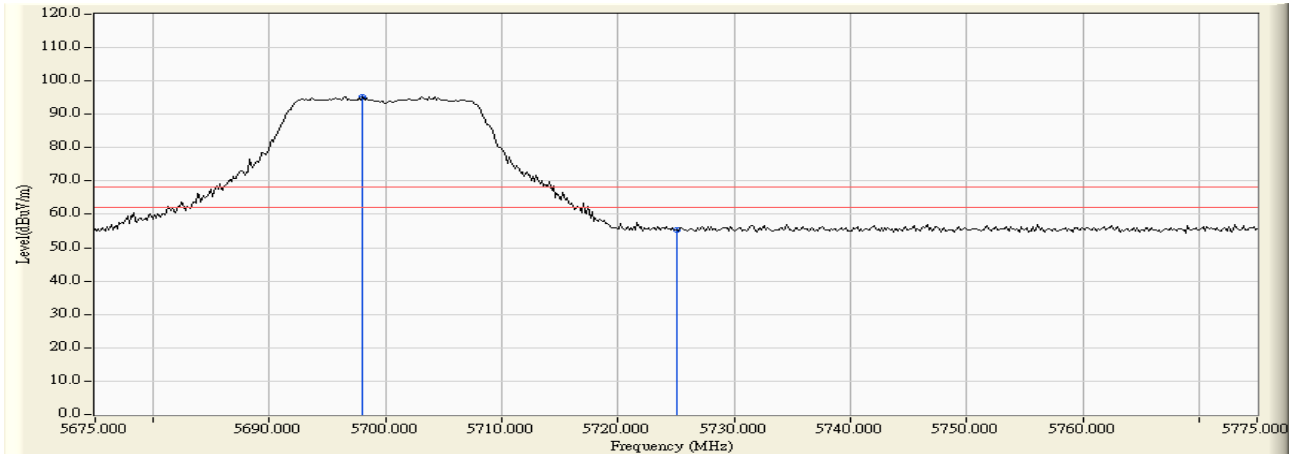
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5464.928	4.420	52.976	57.396	-10.824	68.220	Pass
Horizontal	5470.000	4.488	50.785	55.273	-12.947	68.220	Pass
Horizontal	5503.623	4.839	92.929	97.769	29.549	68.220	Pass



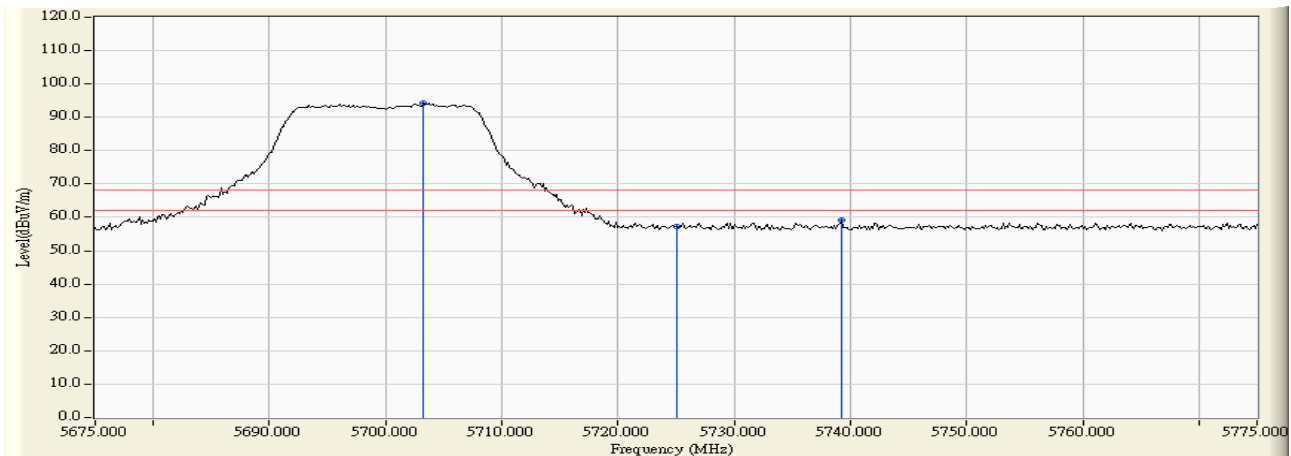
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5467.536	6.093	51.911	58.005	-10.215	68.220	Pass
Vertical	5470.000	6.112	50.277	56.388	-11.832	68.220	Pass
Vertical	5503.623	6.285	88.231	94.517	26.297	68.220	Pass

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 140

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5698.043	4.621	90.714	95.336	27.116	68.220	Pass
Horizontal	5725.000	4.654	50.798	55.452	-12.768	68.220	Pass



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5703.261	5.987	88.259	94.246	26.026	68.220	Pass
Vertical	5725.000	5.992	51.163	57.156	-11.064	68.220	Pass
Vertical	5739.203	5.990	53.102	59.092	-9.128	68.220	Pass

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 36 (5180MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5150.000	3.340	51.896	55.236	74.00	54.00	Pass
36 (Peak)	5187.536	3.208	92.720	95.928	--	--	--
36 (Average)	5150.000	3.340	38.818	42.158	74.00	54.00	Pass
36 (Average)	5187.101	3.209	81.821	85.030	--	--	--

Figure Channel 36:

Horizontal (Peak)

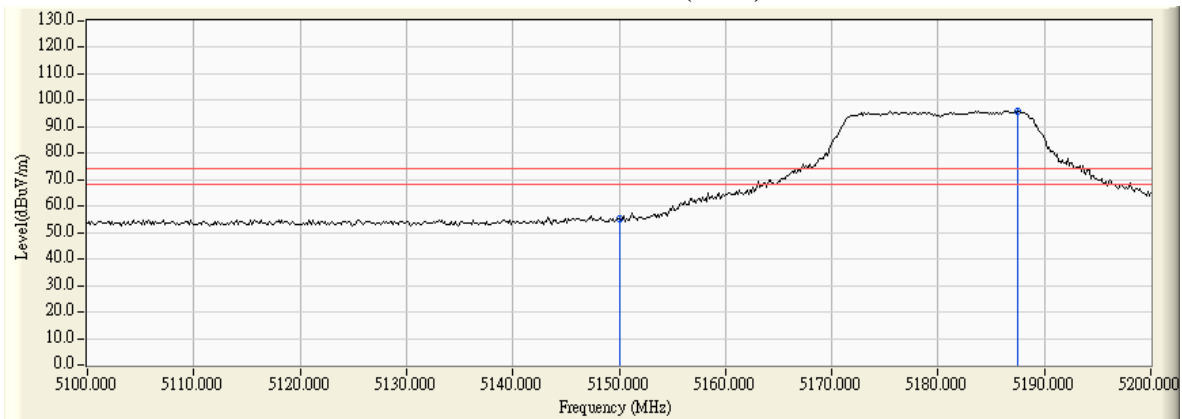
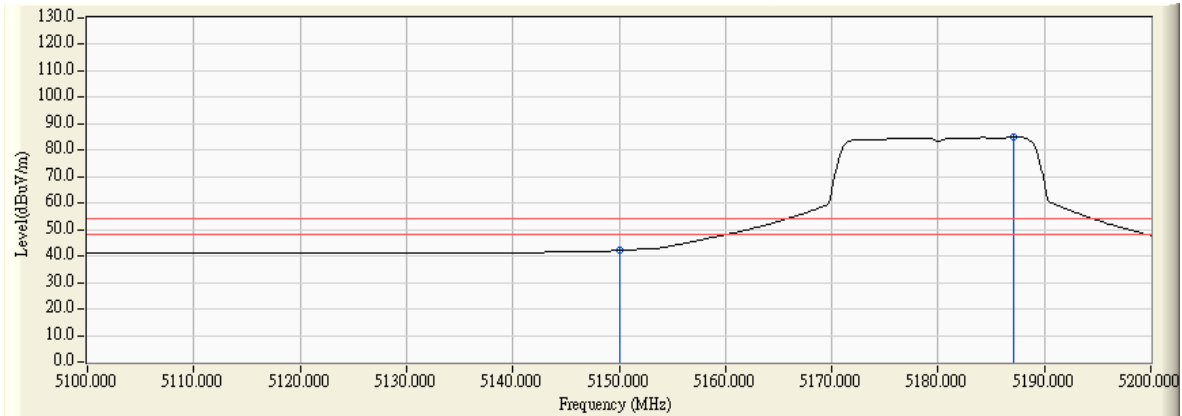


Figure Channel 36:

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 Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 36 (5180MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5141.159	5.235	52.782	58.018	74.00	54.00	Pass
36 (Peak)	5150.000	5.260	51.097	56.357	74.00	54.00	Pass
36 (Peak)	5178.406	5.336	93.183	98.520	--	--	--
36 (Average)	5150.000	5.260	38.606	43.866	74.00	54.00	Pass
36 (Average)	5187.101	5.361	81.239	86.600	--	--	--

Figure Channel 36: Vertical (Peak)

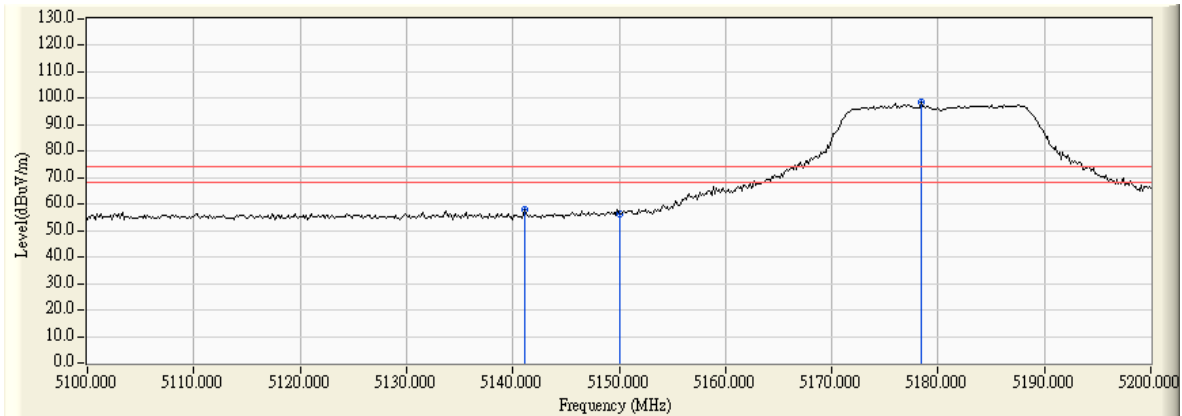
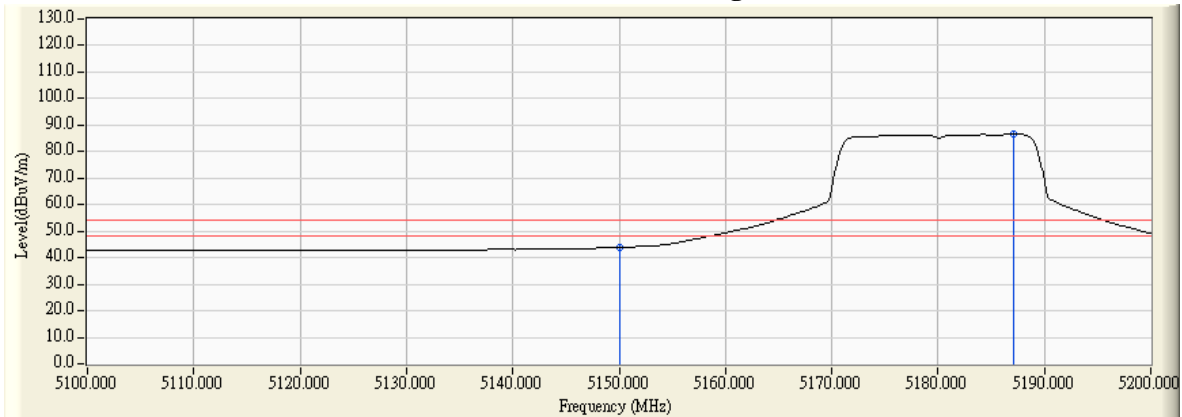


Figure Channel 36: Vertical (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 64 (5320MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
64 (Peak)	5313.768	3.833	91.431	95.263	--	--	--
64 (Peak)	5350.000	3.716	50.863	54.580	74.00	54.00	Pass
64 (Peak)	5354.058	3.704	54.223	57.926	74.00	54.00	Pass
64 (Average)	5313.043	3.835	80.133	83.968	--	--	--
64 (Average)	5350.000	3.716	38.579	42.296	74.00	54.00	Pass

Figure Channel 64: Horizontal (Peak)

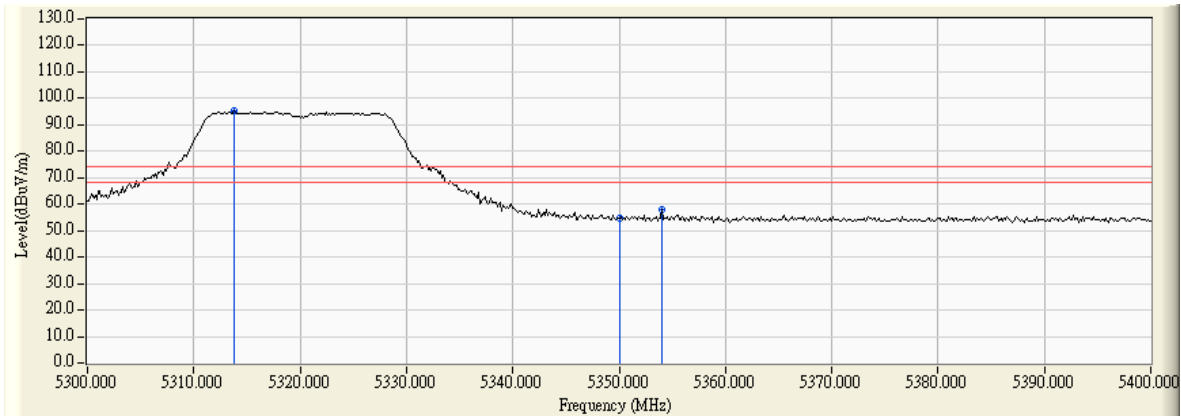
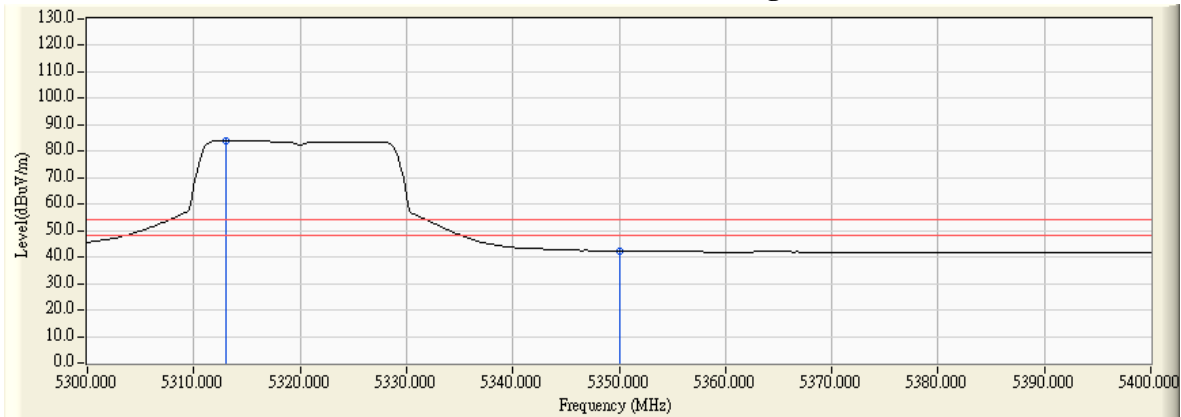


Figure Channel 64: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 64 (5320MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
64 (Peak)	5315.797	5.735	91.973	97.707	--	--	--
64 (Peak)	5350.000	5.691	50.801	56.493	74.00	54.00	Pass
64 (Average)	5312.174	5.739	80.497	86.236	--	--	--
64 (Average)	5350.000	5.691	38.538	44.230	74.00	54.00	Pass

Figure Channel 64:

Vertical (Peak)

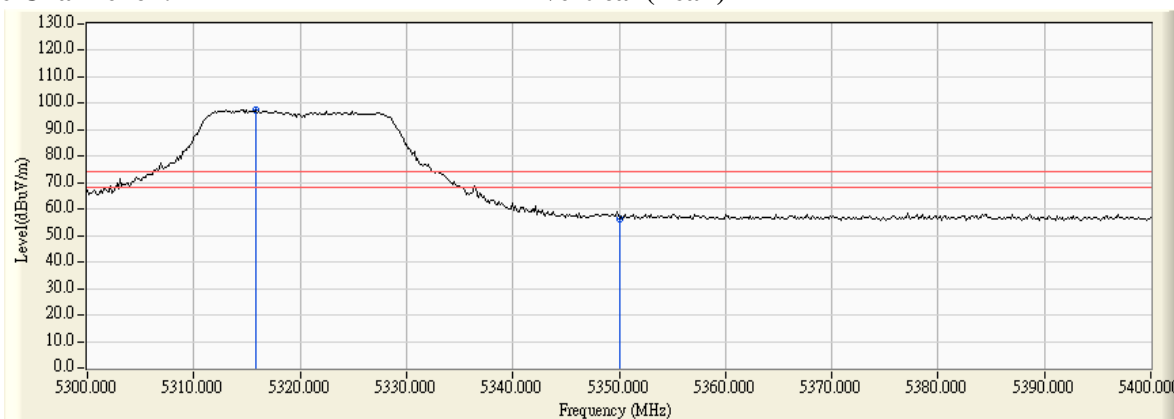
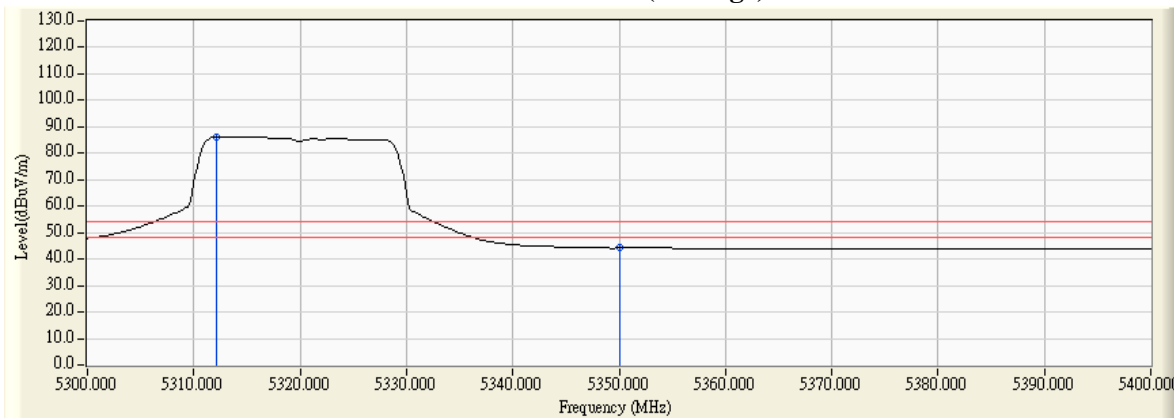


Figure Channel 64:

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 Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 100 (5500MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
100 (Peak)	5460.000	4.354	51.782	56.136	74.00	54.00	Pass
100 (Peak)	5504.928	4.848	92.822	97.671	--	--	--
100 (Average)	5460.000	4.354	38.437	42.791	74.00	54.00	Pass
100 (Average)	5507.101	4.832	81.614	86.446	--	--	--

Figure Channel 100:

Horizontal (Peak)

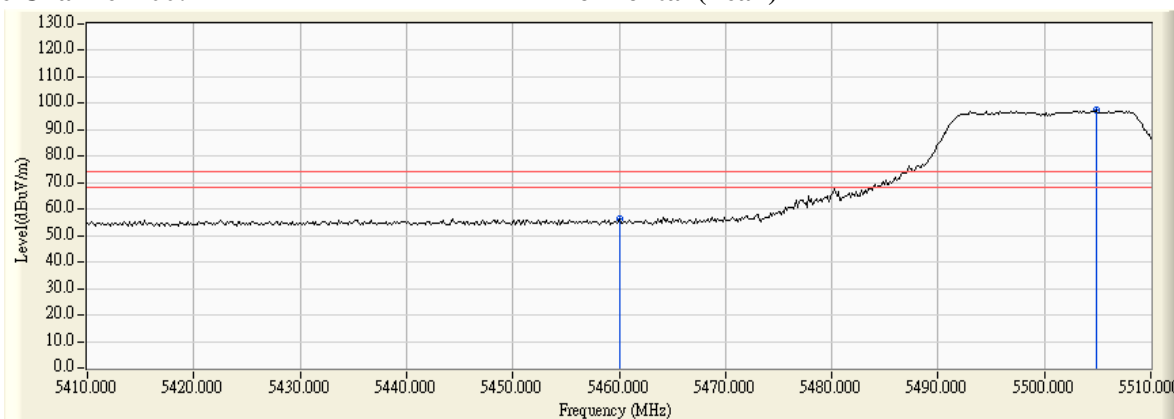
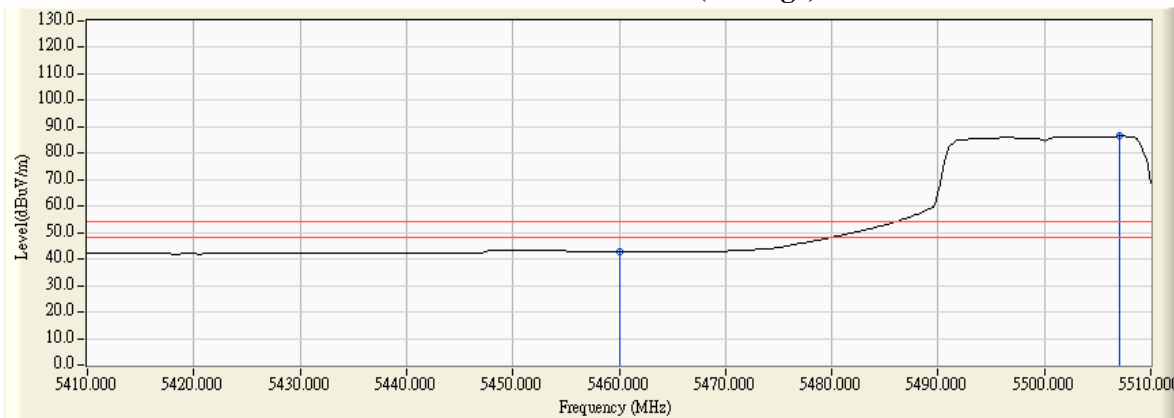


Figure Channel 100:

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 Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 100 (5500MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
100 (Peak)	5460.000	6.041	50.614	56.655	74.00	54.00	Pass
100 (Peak)	5504.928	6.289	89.738	96.028	--	--	--
100 (Average)	5460.000	6.041	38.390	44.431	74.00	54.00	Pass
100 (Average)	5507.246	6.276	78.359	84.635	--	--	--

Figure Channel 100: Vertical (Peak)

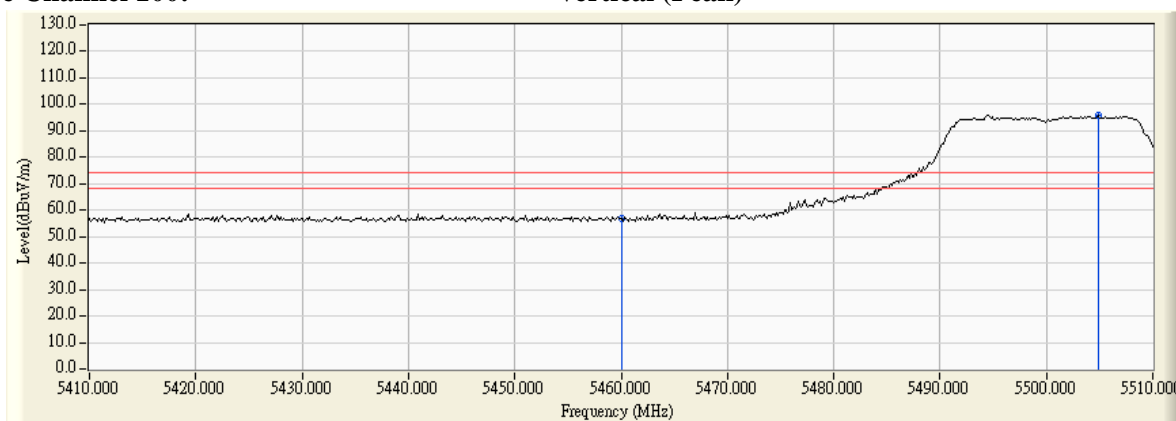


Figure Channel 100: Vertical (Average)

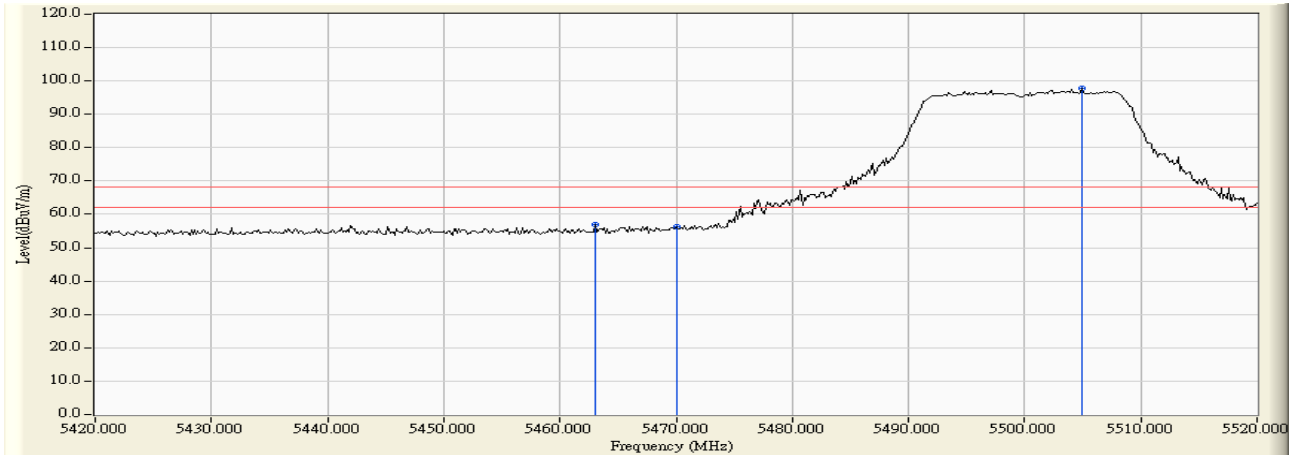


Note:

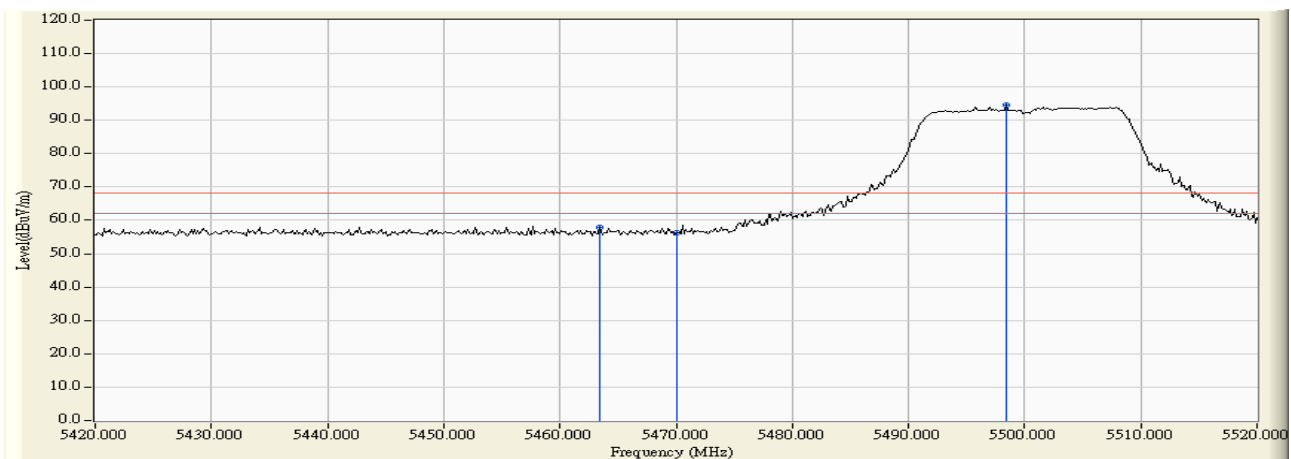
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading 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 Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 100

RF Radiated Measurement:



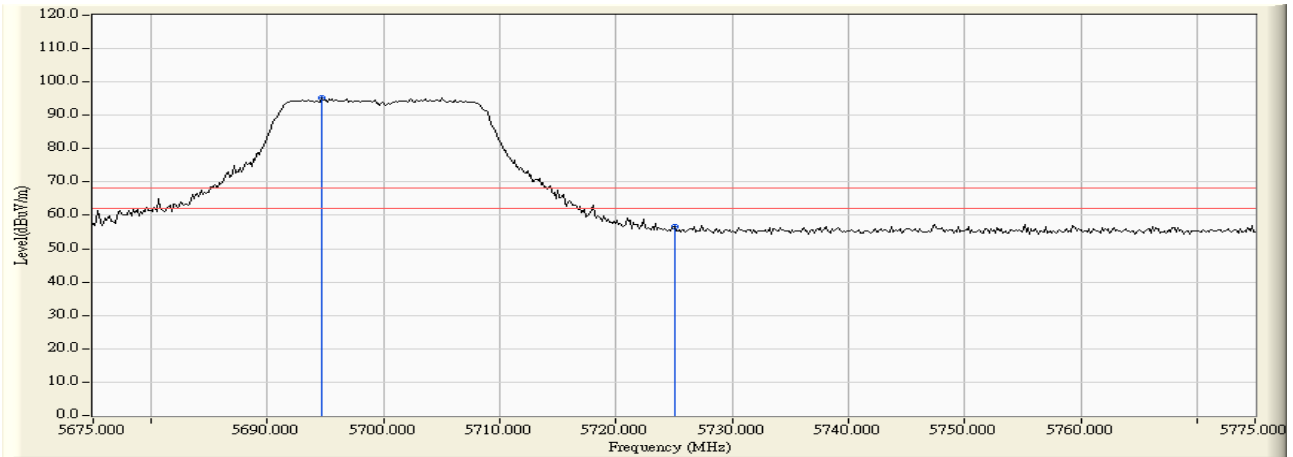
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5463.043	4.395	52.552	56.947	-11.273	68.220	Pass
Horizontal	5470.000	4.488	51.768	56.256	-11.964	68.220	Pass
Horizontal	5504.928	4.848	92.820	97.669	29.449	68.220	Pass



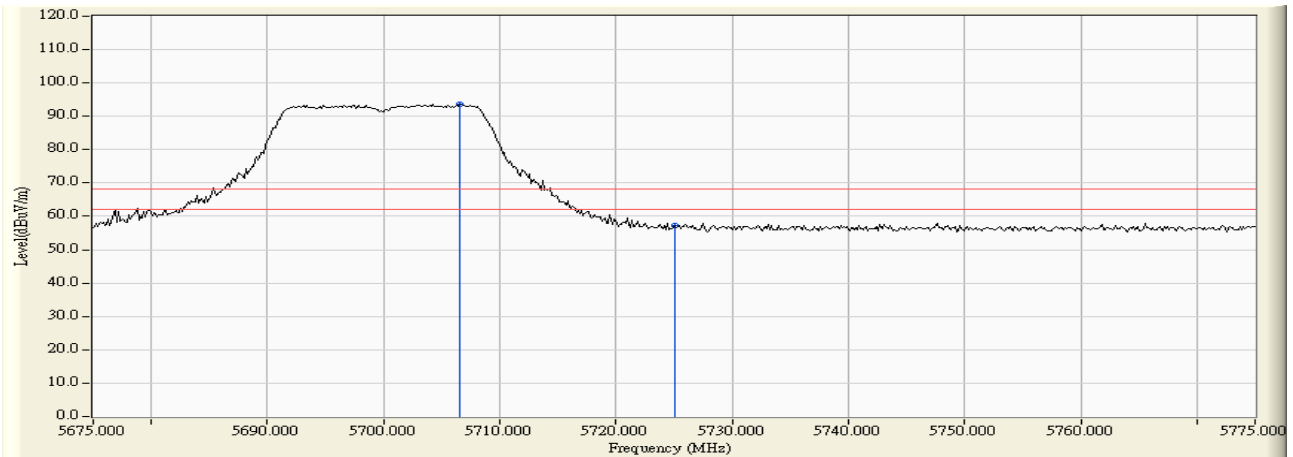
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5463.478	6.065	51.713	57.778	-10.442	68.220	Pass
Vertical	5470.000	6.112	50.246	56.357	-11.863	68.220	Pass
Vertical	5498.406	6.269	88.388	94.658	26.438	68.220	Pass

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 140

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5694.710	4.613	90.740	95.353	27.133	68.220	Pass
Horizontal	5725.000	4.654	51.823	56.477	-11.743	68.220	Pass



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5706.594	5.991	87.671	93.662	25.442	68.220	Pass
Vertical	5725.000	5.992	51.238	57.231	-10.989	68.220	Pass

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 38 (5190MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
38 (Peak)	5150.000	3.340	52.931	56.271	74.00	54.00	Pass
38 (Peak)	5193.913	3.180	88.425	91.604	--	--	--
38 (Average)	5150.000	3.340	38.980	42.320	74.00	54.00	Pass
38 (Average)	5196.377	3.167	76.272	79.440	--	--	--

Figure Channel 38: Horizontal (Peak)

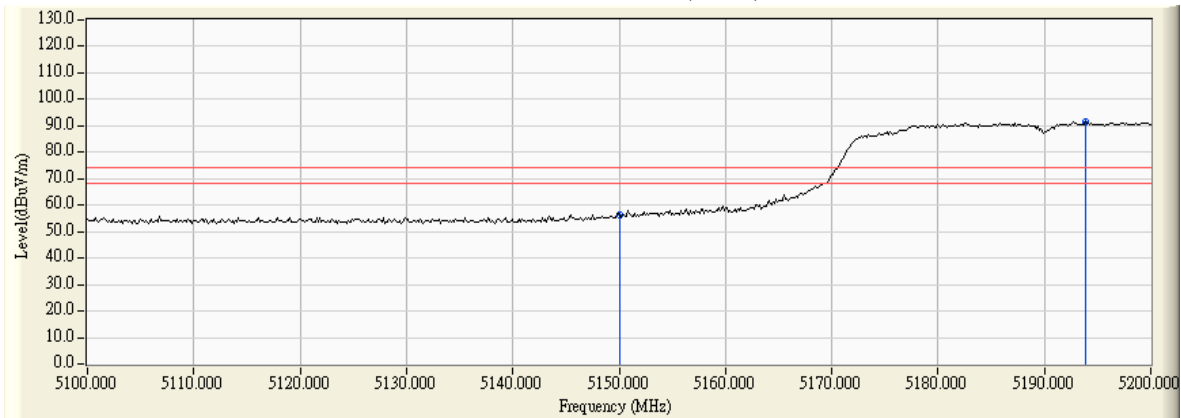
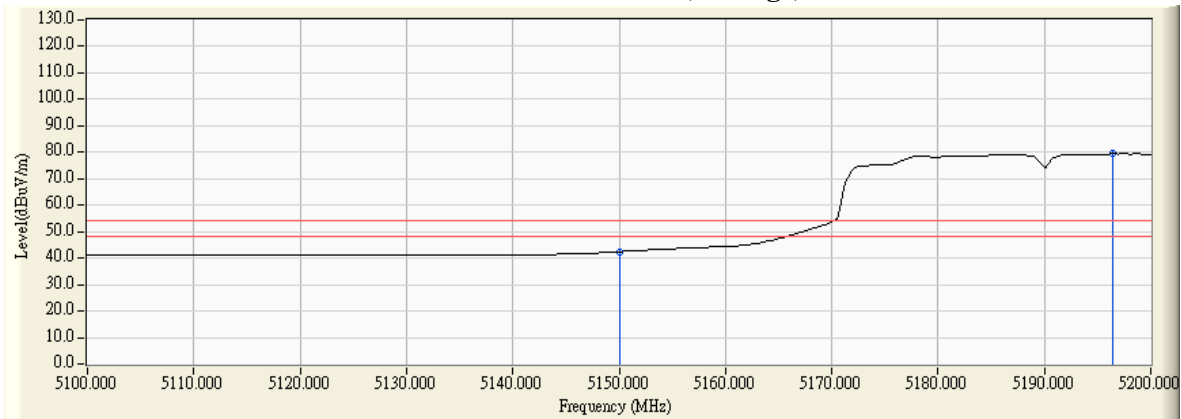


Figure Channel 38: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 38 (5190MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
38 (Peak)	5150.000	5.260	51.231	56.491	74.00	54.00	Pass
38 (Peak)	5194.928	5.375	86.804	92.180	--	--	--
38 (Average)	5150.000	5.260	38.746	44.006	74.00	54.00	Pass
38 (Average)	5196.522	5.378	75.461	80.839	--	--	Pass

Figure Channel 38: Vertical (Peak)

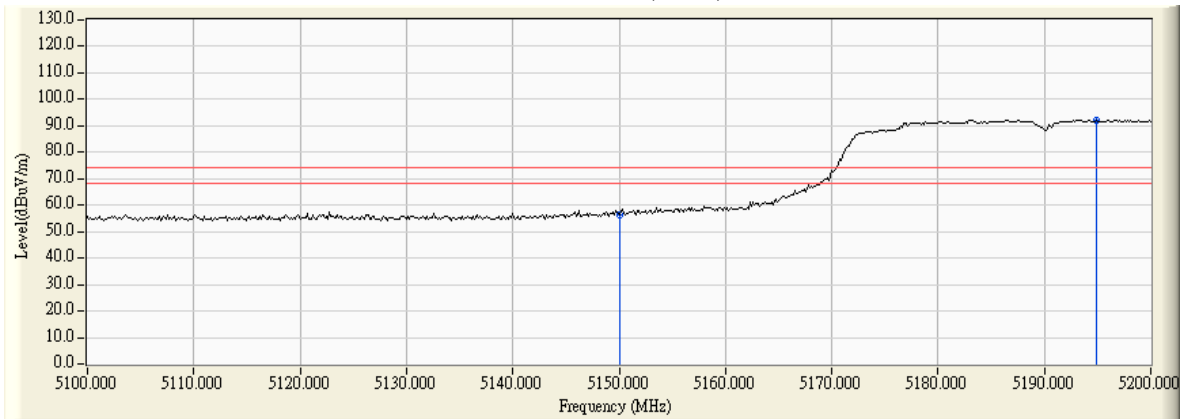
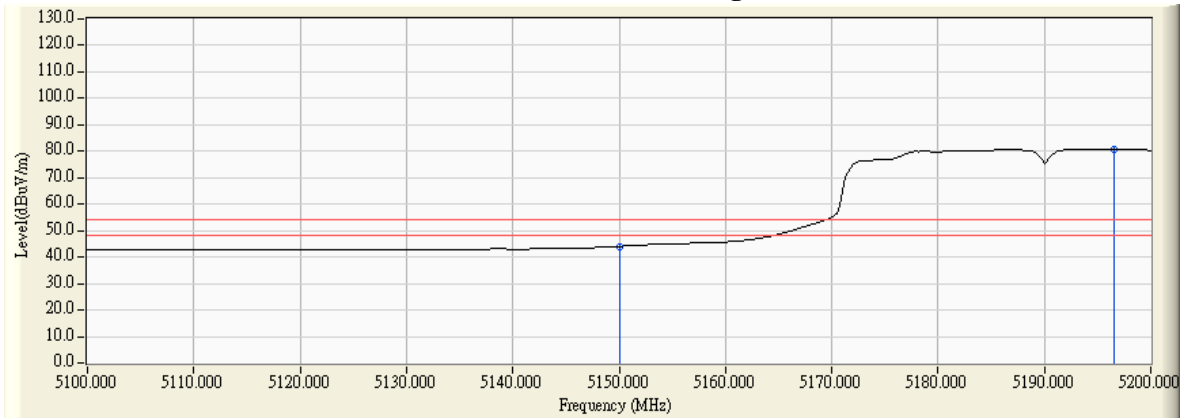


Figure Channel 38: Vertical (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 62 (5310MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
62 (Peak)	5302.464	3.869	90.766	94.635	--	--	--
62 (Peak)	5350.000	3.716	51.025	54.742	74.00	54.00	Pass
62 (Average)	5302.754	3.869	78.187	82.055	--	--	--
62 (Average)	5350.000	3.716	38.926	42.643	74.00	54.00	Pass

Figure Channel 62: Horizontal (Peak)

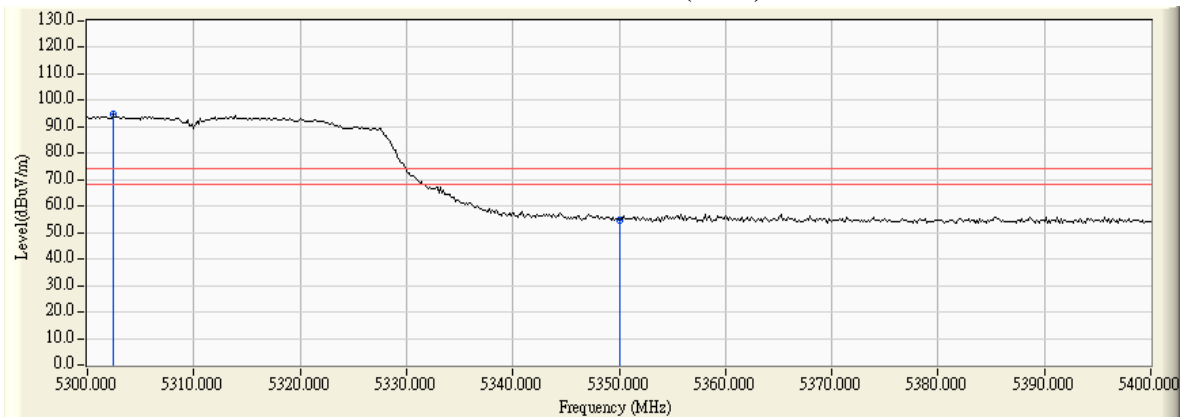
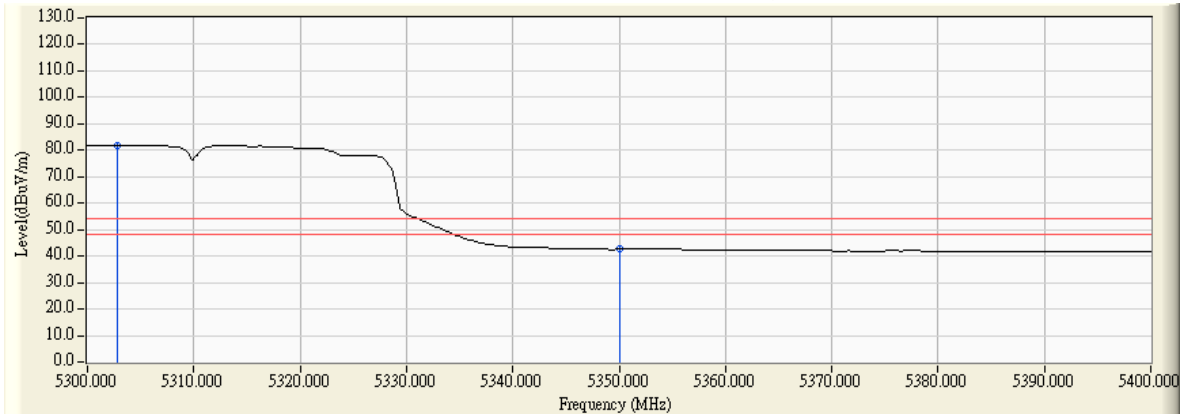


Figure Channel 62: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 62 (5310MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
62 (Peak)	5303.188	5.751	90.778	96.529	--	--	--
62 (Peak)	5350.000	5.691	50.974	56.666	74.00	54.00	Pass
62 (Peak)	5351.449	5.689	52.865	58.555	74.00	54.00	Pass
62 (Average)	5301.449	5.753	78.901	84.654	--	--	--
62 (Average)	5350.000	5.691	38.744	44.436	74.00	54.00	Pass

Figure Channel 62: Vertical (Peak)

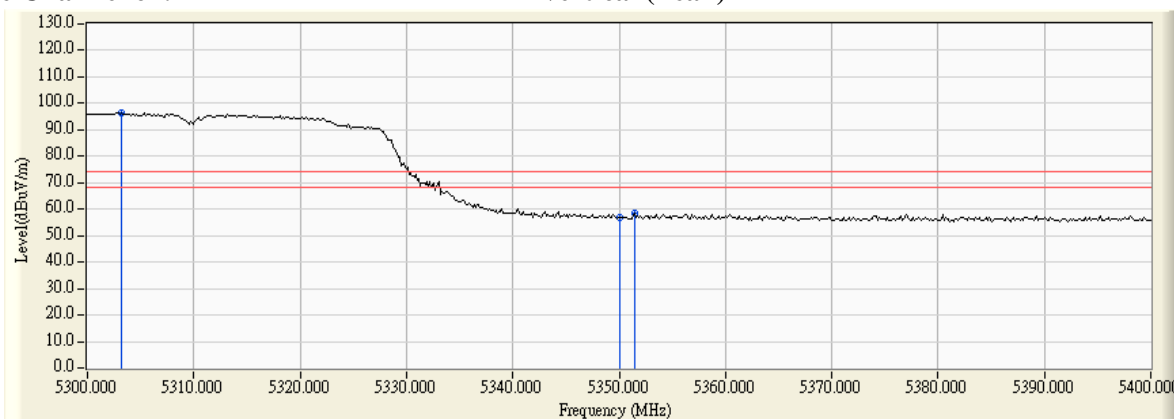
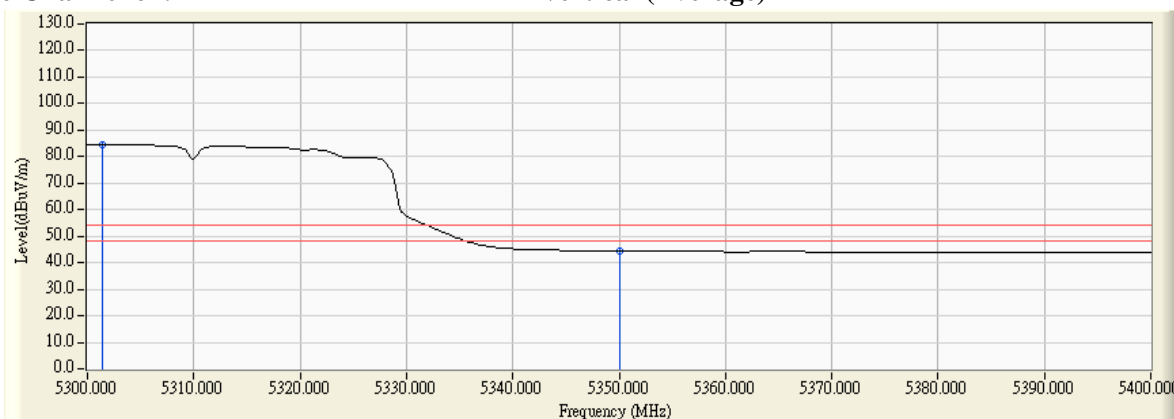


Figure Channel 62: Vertical (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 102 (5510MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
102 (Peak)	5460.000	4.354	50.608	54.962	74.00	54.00	Pass
102 (Peak)	5508.116	4.824	87.532	92.356	--	--	--
102 (Average)	5460.000	4.354	38.422	42.776	74.00	54.00	Pass
102 (Average)	5506.667	4.836	76.169	81.005	--	--	--

Figure Channel 102: Horizontal (Peak)

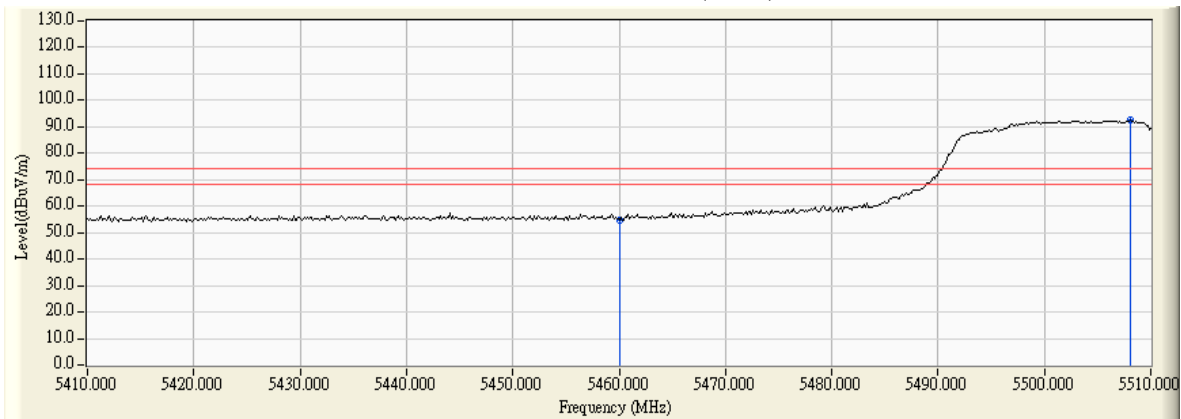
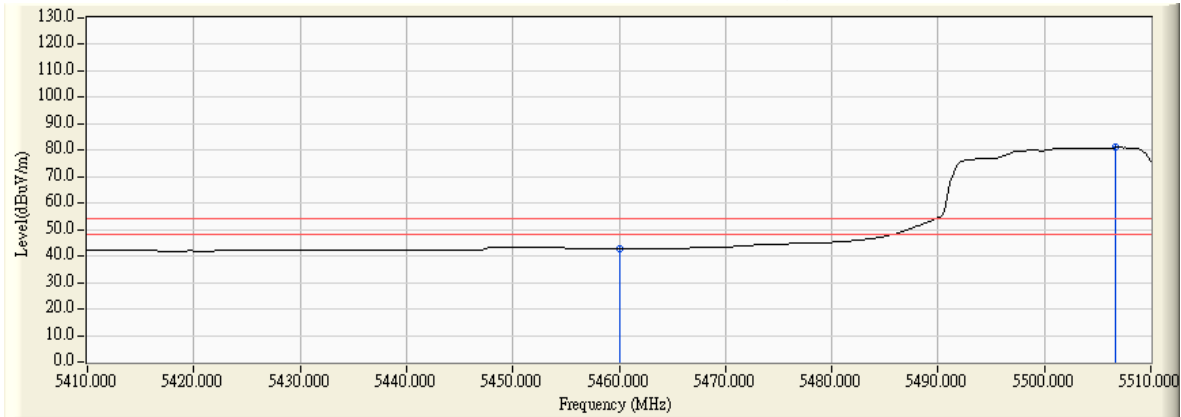


Figure Channel 102: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 102 (5510MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
102 (Peak)	5460.000	6.041	50.146	56.187	74.00	54.00	Pass
102 (Peak)	5506.087	6.284	84.423	90.706	--	--	--
102 (Average)	5460.000	6.041	38.336	44.377	74.00	54.00	Pass
102 (Average)	5506.812	6.279	72.694	78.972	--	--	--

Figure Channel 102: Vertical (Peak)

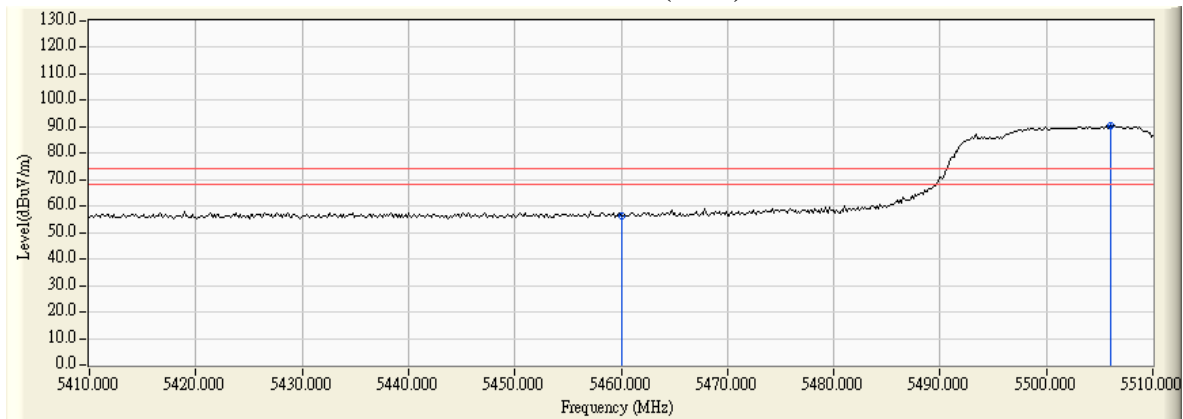
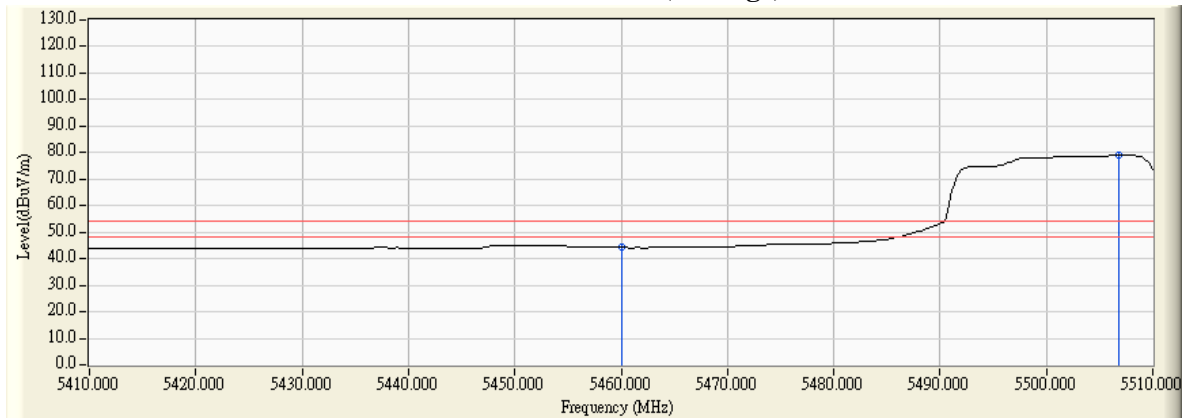


Figure Channel 102: Vertical (Average)

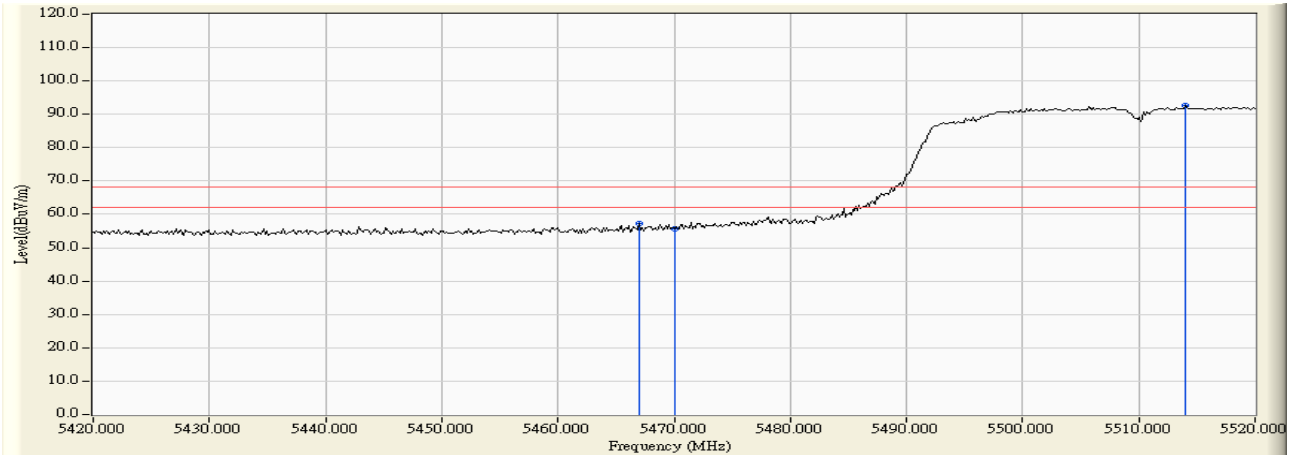


Note:

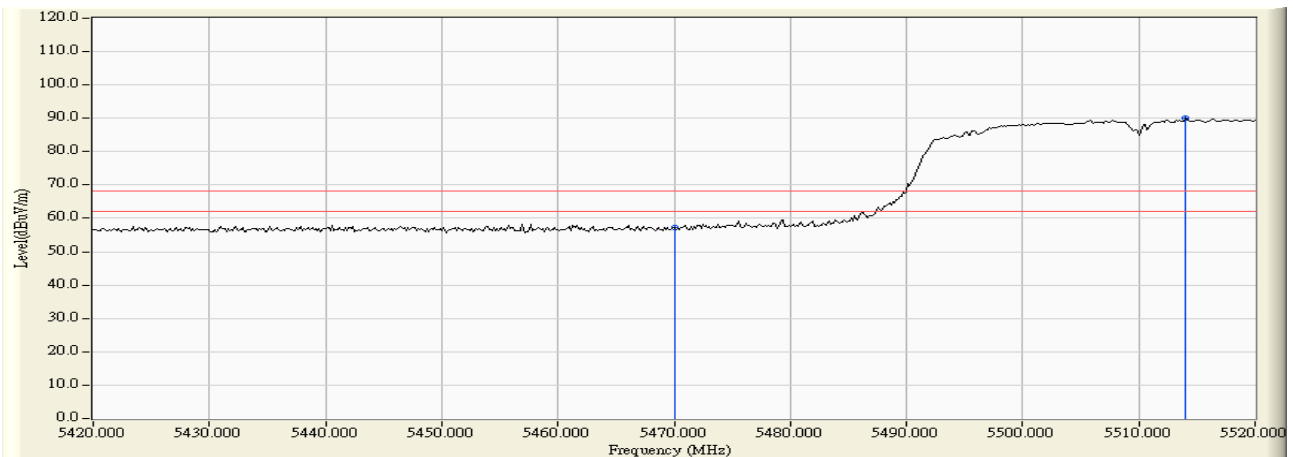
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading 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 Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 102

RF Radiated Measurement:



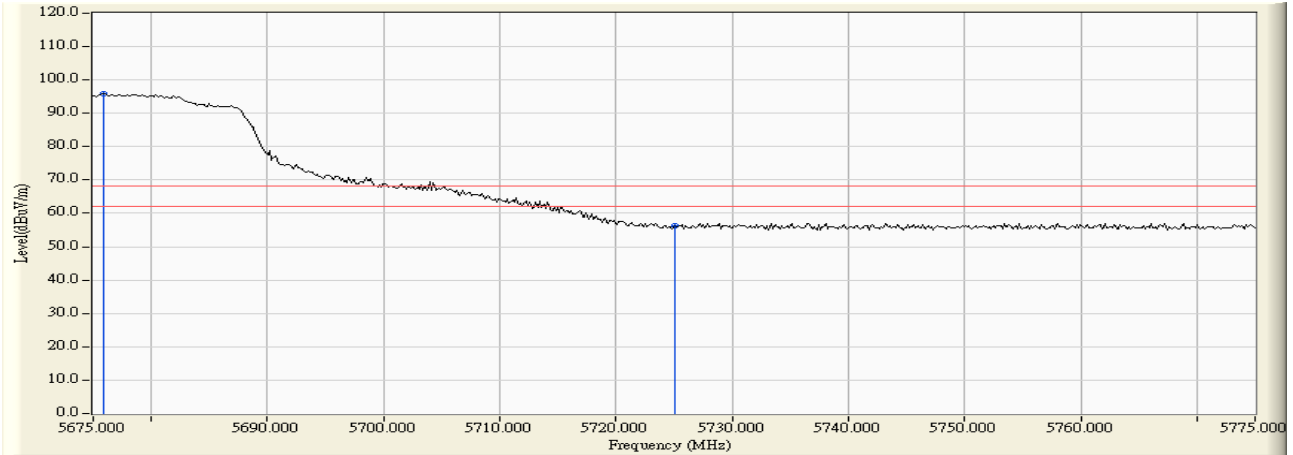
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5466.957	4.447	52.833	57.280	-10.940	68.220	Pass
Horizontal	5470.000	4.488	51.309	55.797	-12.423	68.220	Pass
Horizontal	5514.058	4.776	87.903	92.679	24.459	68.220	Pass



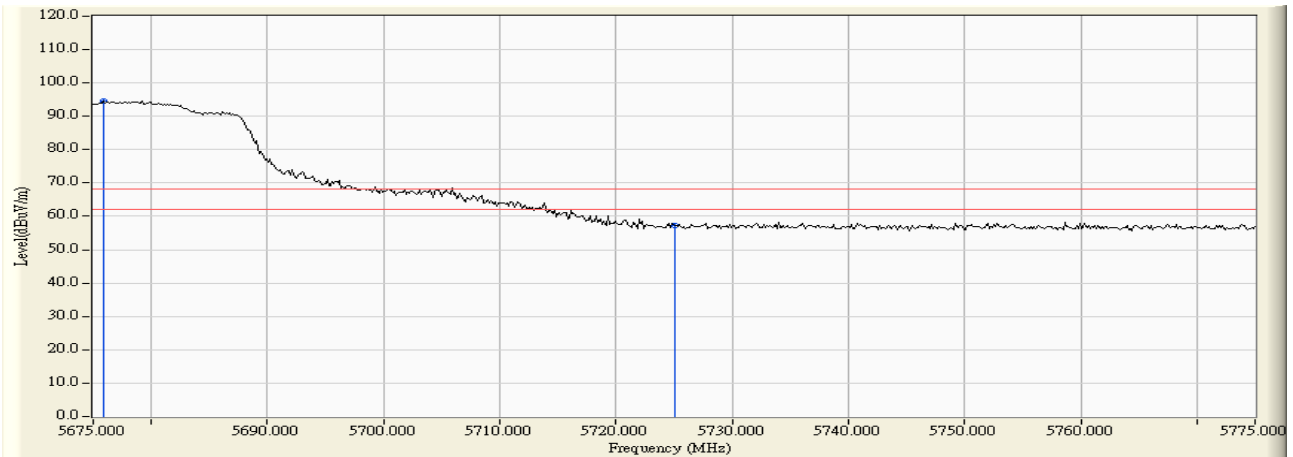
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5470.000	6.112	51.237	57.348	-10.872	68.220	Pass
Vertical	5514.058	6.232	83.812	90.044	21.824	68.220	Pass

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 134

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5675.870	4.516	91.421	95.938	27.718	68.220	Pass
Horizontal	5725.000	4.654	51.589	56.243	-11.977	68.220	Pass



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5675.870	5.924	88.599	94.523	26.303	68.220	Pass
Vertical	5725.000	5.992	51.282	57.275	-10.945	68.220	Pass

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 42 (5210MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
42 (Peak)	5150.000	3.340	49.825	53.165	74.00	54.00	Pass
42 (Peak)	5198.986	3.156	82.073	85.229	--	--	--
42 (Average)	5150.000	3.340	37.795	41.135	74.00	54.00	Pass
42 (Average)	5198.841	3.156	69.847	73.004	--	--	--

Figure Channel 42: Horizontal (Peak)

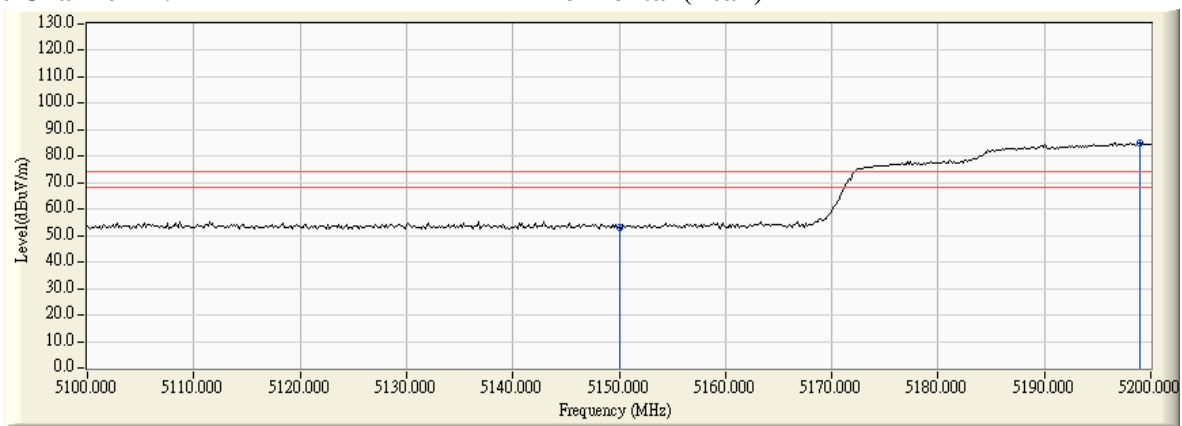
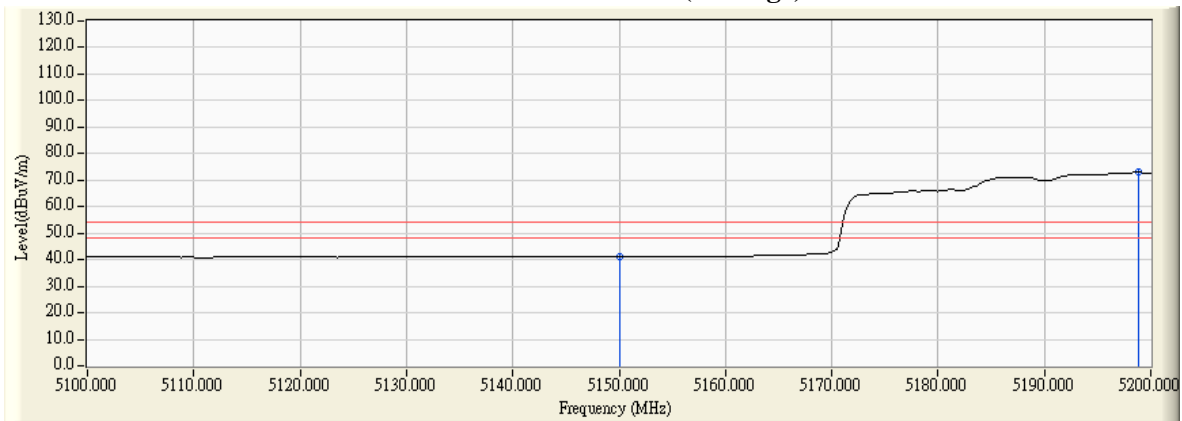


Figure Channel 42: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 42 (5210MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
42 (Peak)	5150.000	5.260	49.851	55.111	74.00	54.00	Pass
42 (Peak)	5198.986	5.383	80.549	85.932	--	--	--
42 (Average)	5150.000	5.260	37.776	43.036	74.00	54.00	Pass
42 (Average)	5198.696	5.382	68.248	73.630	--	--	--

Figure Channel 42: Vertical (Peak)

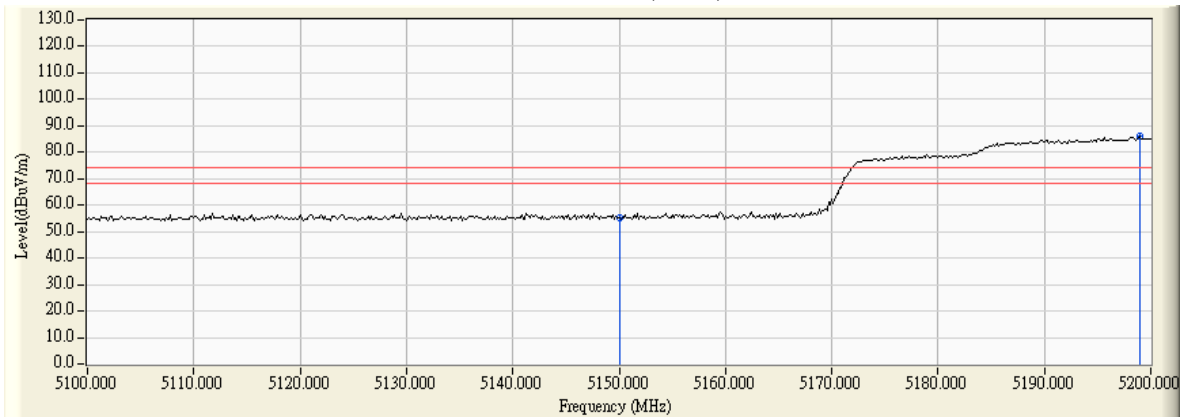
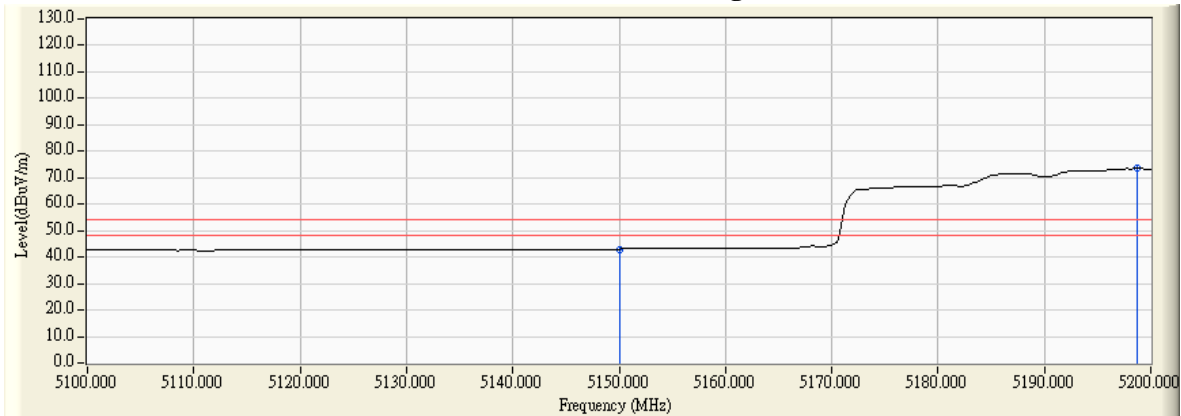


Figure Channel 42: Vertical (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 58 (5290MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
58 (Peak)	5303.913	3.864	78.486	82.350	--	--	--
58 (Peak)	5350.000	3.716	50.150	53.867	74.00	54.00	Pass
58 (Average)	5301.304	3.873	66.528	70.401	--	--	--
58 (Average)	5350.000	3.716	38.090	41.807	74.00	54.00	Pass

Figure Channel 58: Horizontal (Peak)

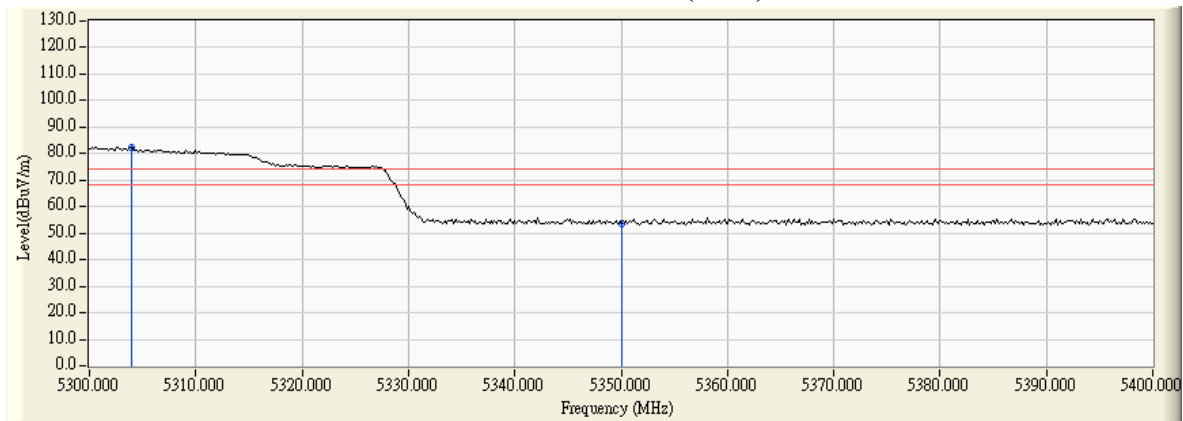
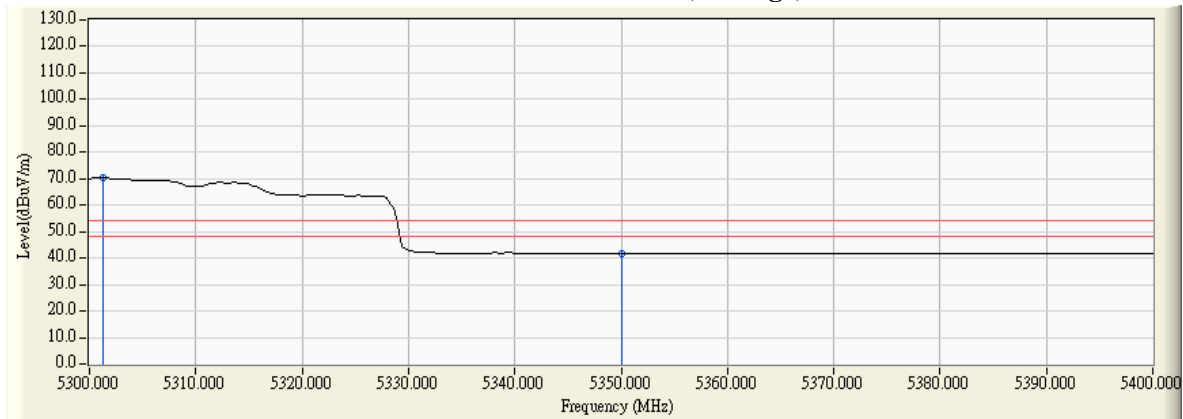


Figure Channel 58: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 58 (5290MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
58 (Peak)	5301.739	5.753	78.802	84.555	--	--	--
58 (Peak)	5350.000	5.691	49.800	55.492	74.00	54.00	Pass
58 (Average)	5301.304	5.753	66.663	72.416	--	--	--
58 (Average)	5350.000	5.691	38.053	43.745	74.00	54.00	Pass

Figure Channel 58: Vertical (Peak)

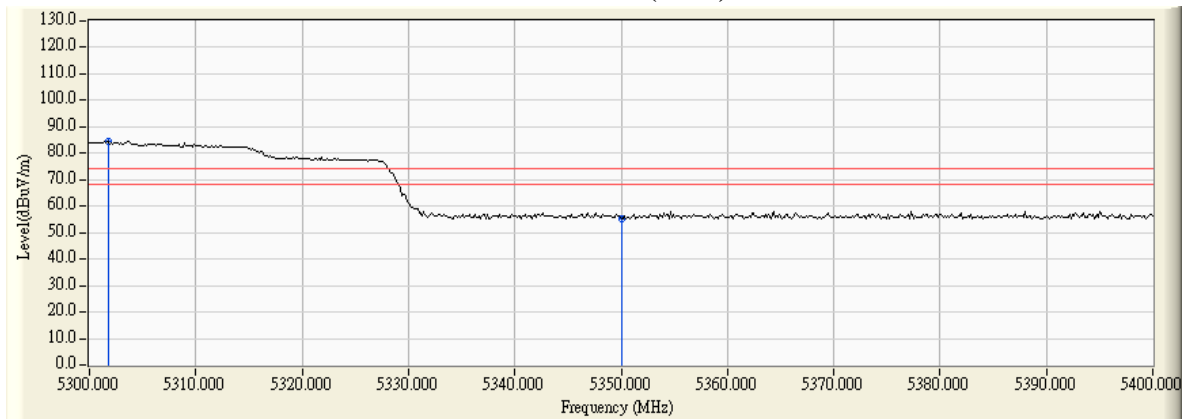
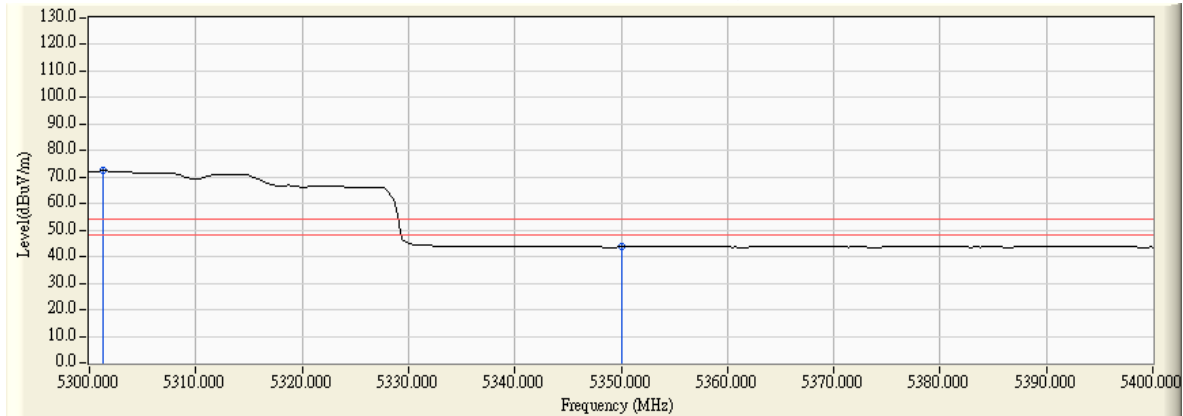


Figure Channel 58: Vertical (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 106 (5530MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
106 (Peak)	5460.000	4.354	50.270	54.624	74.00	54.00	Pass
106 (Peak)	5510.000	4.809	80.315	85.124	--	--	--
106 (Average)	5460.000	4.354	38.719	43.073	74.00	54.00	Pass
106 (Average)	5507.536	4.828	67.725	72.554	--	--	--

Figure Channel 106: Horizontal (Peak)

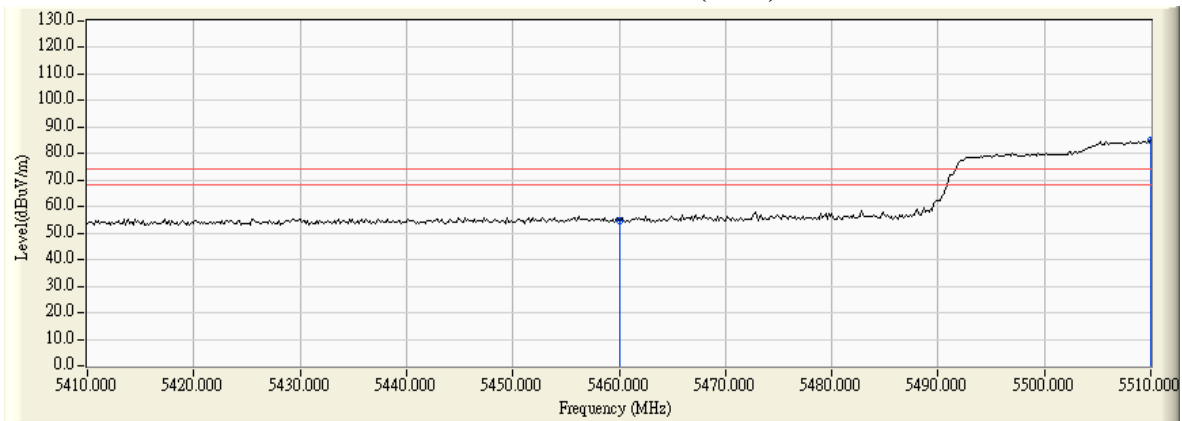
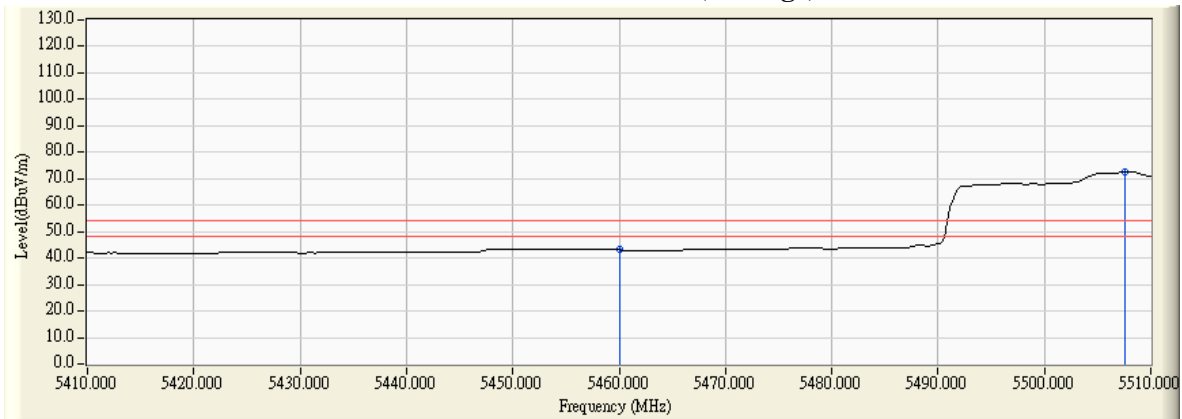


Figure Channel 106: Horizontal (Average)



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 Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 106 (5530MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
106 (Peak)	5460.000	6.041	50.245	56.286	74.00	54.00	Pass
106 (Peak)	5510.000	6.258	77.154	83.412	--	--	--
106 (Average)	5460.000	6.041	38.282	44.323	74.00	54.00	Pass
106 (Average)	5507.681	6.273	64.733	71.006	--	--	--

Figure Channel 106: Vertical (Peak)

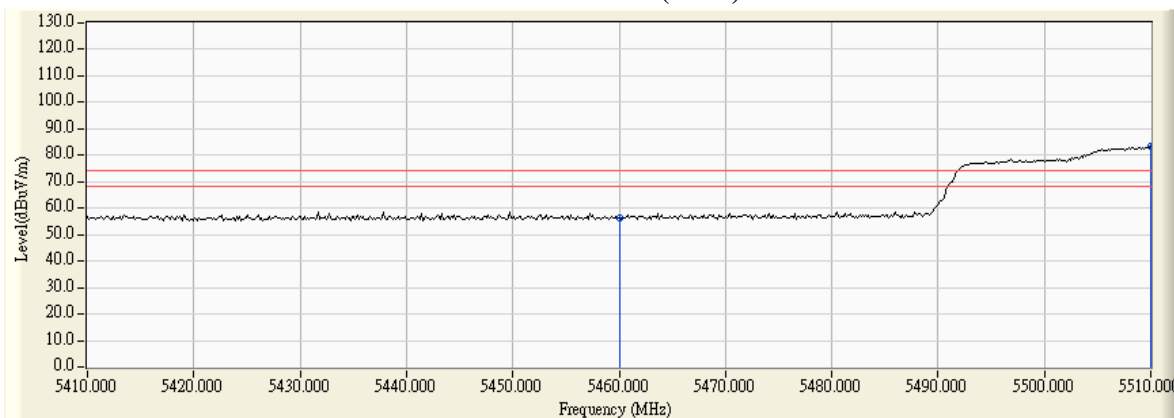
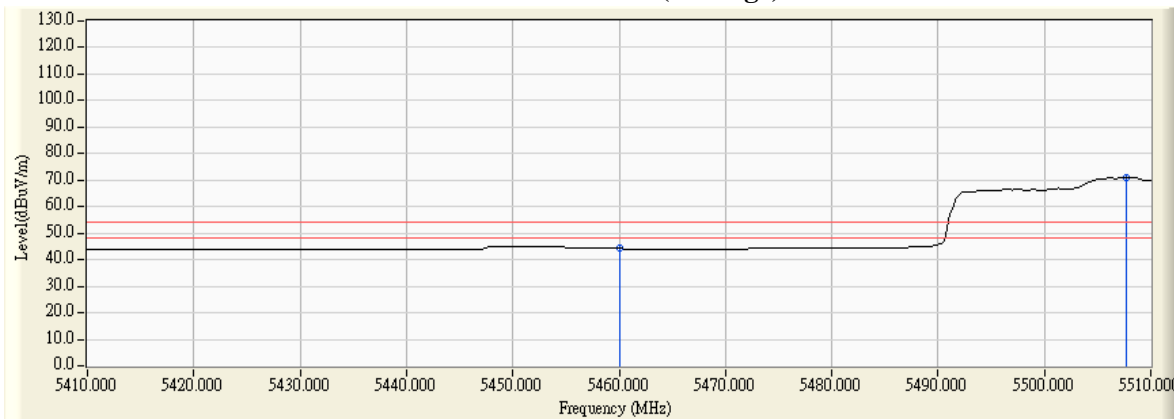


Figure Channel 106: Vertical (Average)

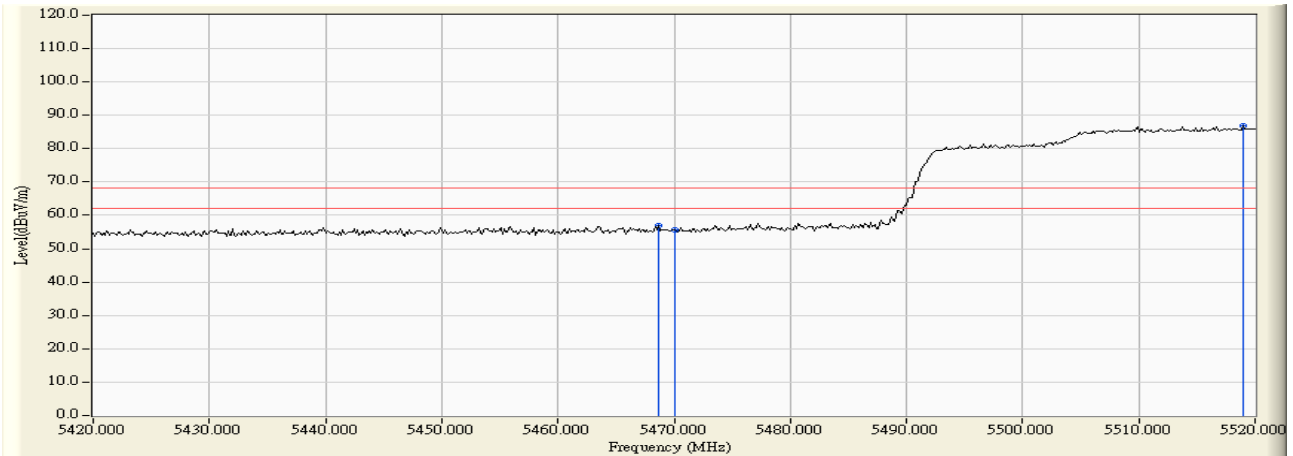


Note:

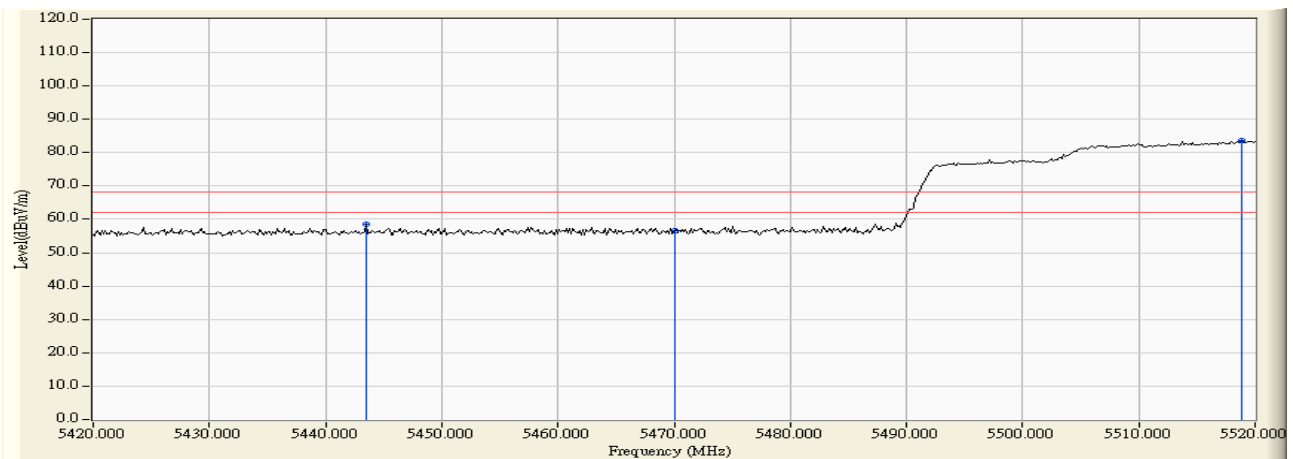
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading 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 Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 106

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5468.696	4.471	52.405	56.875	-11.345	68.220	Pass
Horizontal	5470.000	4.488	51.321	55.809	-12.411	68.220	Pass
Horizontal	5518.986	4.737	82.043	86.780	18.560	68.220	Pass



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5443.478	5.927	52.664	58.591	-9.629	68.220	Pass
Vertical	5470.000	6.112	50.463	56.574	-11.646	68.220	Pass
Vertical	5518.841	6.202	77.492	83.694	15.474	68.220	Pass

5. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs