

FCC Test Report

(Class II Permissive Change)

Product Name	Intel® Wireless-AC 9260
Model No.	9260NGW
FCC ID.	2ABTU-9260NG

Applicant	RuggON Corporation
Address	4F, No. 298, Yang Guang St., Neihs Dist., Taipei City, Taiwan

Date of Receipt	Sep. 15, 2017
Issued Date	Sep. 09, 2020
Report No.	2060585R-E3032160654-C
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 report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

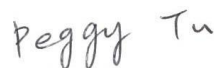
Issued Date: Sep. 09, 2020

Report No.: 2060585R-E3032160654-C



Product Name	Intel® Wireless-AC 9260
Applicant	RuggON Corporation
Address	4F, No. 298, Yang Guang St., Neihu Dist., Taipei City, Taiwan
Manufacturer	Intel Mobile Communications
Model No.	9260NGW
FCC ID.	2ABTU-9260NG
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	AC 120V/60Hz
Trade Name	Intel
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2015 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v04
Test Result	Complied

Documented By :



(Adm. Assistant / Peggy Tu)

Tested By :



(Engineer / Kevin Liu)

Approved By :



(Director / Vincent Lin)

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs - External

Attachment 3: EUT Detailed Photographs - Internal

Revision History

Report No.	Version	Description	Issued Date
2060585R-E3032160654-C	V1.0	Initial issue of report	Sep. 09, 2020

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Wireless-AC 9260
Trade Name	Intel
Model No.	9260NGW
FCC ID.	2ABTU-9260NG
Frequency Range	2402 – 2480MHz
Channel Number	V4.2: 40CH
Type of Modulation	V4.2: GFSK
Antenna Type	Dipole Antenna
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WIESON Technologies co ., ltd	GY121HT0321-003-H (Main), (Aux)	Dipole	2.89dBi for 2.4 GHz

Note: The antenna of EUT is conforming to FCC 15.203.

Center Frequency of Each Channel: (For V4.2)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 01:	2404 MHz	Channel 02:	2406 MHz	Channel 03:	2408 MHz
Channel 04:	2410 MHz	Channel 05:	2412 MHz	Channel 06:	2414 MHz	Channel 07:	2416 MHz
Channel 08:	2418 MHz	Channel 09:	2420 MHz	Channel 10:	2422 MHz	Channel 11:	2424 MHz
Channel 12:	2426 MHz	Channel 13:	2428 MHz	Channel 14:	2430 MHz	Channel 15:	2432 MHz
Channel 16:	2434 MHz	Channel 17:	2436 MHz	Channel 18:	2438 MHz	Channel 19:	2440 MHz
Channel 20:	2442 MHz	Channel 21:	2444 MHz	Channel 22:	2446 MHz	Channel 23:	2448 MHz
Channel 24:	2450 MHz	Channel 25:	2452 MHz	Channel 26:	2454 MHz	Channel 27:	2456 MHz
Channel 28:	2458 MHz	Channel 29:	2460 MHz	Channel 30:	2462 MHz	Channel 31:	2464 MHz
Channel 32:	2466 MHz	Channel 33:	2468 MHz	Channel 34:	2470 MHz	Channel 35:	2472 MHz
Channel 36:	2474 MHz	Channel 37:	2476 MHz	Channel 38:	2478 MHz	Channel 39:	2480 MHz

Note:

1. The EUT is an Intel® Wireless-AC 9260 with a built-in 802.11 a/b/g/n/ac Wireless LAN + BDR/EDR 2.1 + BLE 4.2 transceiver, this report for Bluetooth V4.2.
2. This report is a copy report and the original report owner is the same. The original report number is 1790206R-RFUSP25V00, difference is modify the applicant and address.
3. These tests were conducted on a sample for the purpose of demonstrating compliance of Bluetooth transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
5. This is to request a Class II permissive change for FCC ID: 2ABTU-9260NG, originally granted on 07/06/2020.

The major change filed under this application is:

Change #1:

Addition of new dipole type antenna is different from originally antenna type.

Manufacturer. WIESON, Part no. GY121HT0321-003-H.

Test Mode	Mode 1: Transmit - BLE
	Mode 2: Transmit - BLE (5.0)

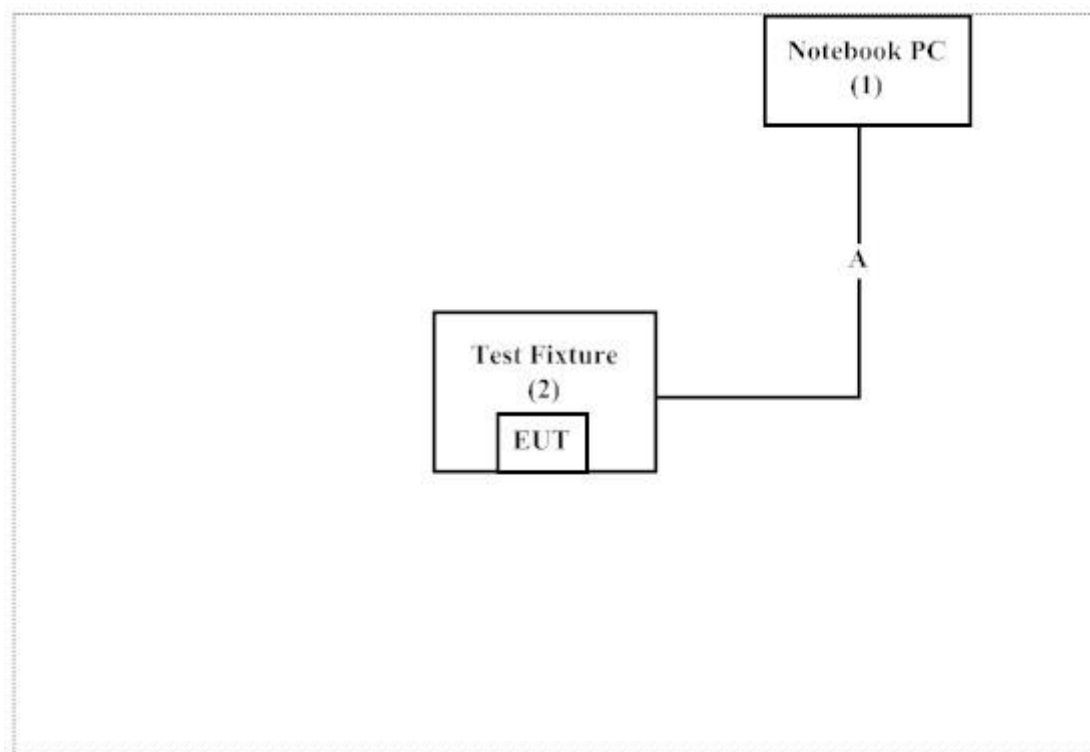
1.3. Tested System Details

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

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	N/A	N/A	N/A
2	Test Fixture	Intel	N/A	N/A	N/A

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

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4.
2. Execute software "DRTU (Ver 1.9.0-03789)" on the Notebook PC.
3. Configure the test mode, the test channel, and the data rate.
4. Press "OK" to start the continuous Transmit.
5. Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

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

Site Description: Accredited by TAF
Accredited Number: 3023

Site Name: DEKRA Testing and Certification Co., Ltd
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 : info.tw@dekra.com

FCC Accreditation Number: TW1014

1.7. List of Test Equipment

For Conducted measurements /ASR4

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103464	2017.01.09	2018.01.08
X	Power Meter	Anritsu	ML2496A	1548003	2016.12.15	2017.12.14
X	Power Sensor	Anritsu	MA2411B	1531024	2016.12.15	2017.12.14
X	Power Sensor	Anritsu	MA2411B	1531025	2016.12.15	2017.12.14
	Bluetooth Tester	R&S	CBT	101238	2017.01.03	2018.01.02

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : QuieTek Conduction Test System V8.0.110

For Radiated measurements /ACB1

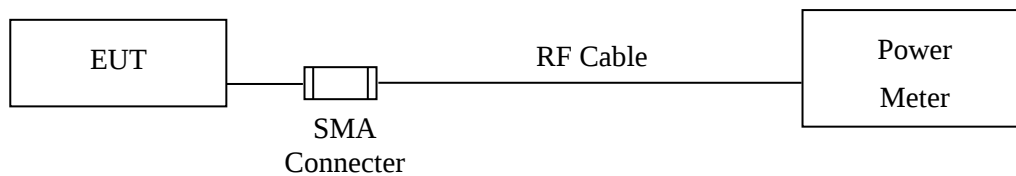
	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Loop Antenna	TESEQ	HLA6121	37133	2016.03.18	2018.03.17
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-674	2017.02.13	2018.02.12
X	Horn Antenna	ETS-Lindgren	3117	00203800	2017.11.10	2018.11.09
X	Horn Antenna	Com-Power	AH-840	101087	2017.05.24	2018.05.23
X	Pre-Amplifier	EMCI	EMC001330	980316	2017.05.16	2018.05.15
X	Pre-Amplifier	EMCI	EMC051835SE	980311	2017.05.17	2018.05.16
X	Pre-Amplifier	EMCI	EMC05820SE	980310	2017.05.17	2018.05.16
X	Pre-Amplifier	EMCI	EMC184045SE	980314	2017.05.17	2018.05.16
X	Filter	MICRO TRONICS	BRM50702	G251	2017.08.30	2018.08.29
	Filter	MICRO TRONICS	BRM50716	G188	2017.08.30	2018.08.29
X	EMI Test Receiver	R&S	ESR7	101602	2016.12.15	2017.12.14
X	Spectrum Analyzer	R&S	FSV40	101148	2017.01.24	2018.01.23
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF002	2017.05.25	2018.05.24
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2017.08.11	2018.08.10

Note:

1. Loop Antenna is calibrated every two year, the other equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : QuieTek EMI 2.0 V2.1.113

2. Peak Power Output

2.1. Test Setup



2.2. Limit

The maximum peak power shall be less 1Watt.

2.3. Test Procedure

Tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

2.4. Uncertainty

± 0.86 dB

2.5. Test Result of Peak Power Output

Product : Intel® Wireless-AC 9260
Test Item : Peak Power Output
Test date : 2017/10/24
Test Mode : Mode 1: Transmit - BLE

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.56	1 Watt= 30 dBm	Pass
Channel 19	2440.00	8.66	1 Watt= 30 dBm	Pass
Channel 39	2480.00	8.72	1 Watt= 30 dBm	Pass

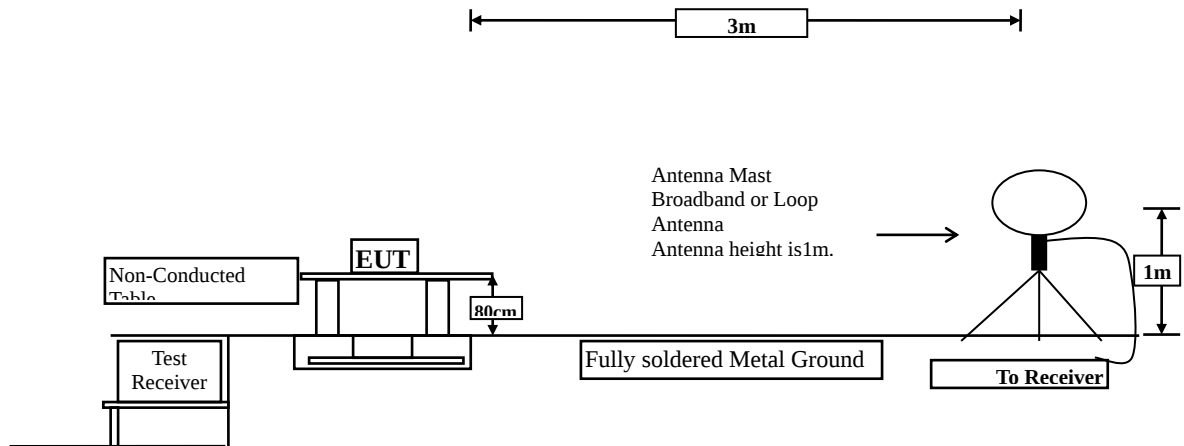
Product : Intel® Wireless-AC 9260
Test Item : Peak Power Output
Test date : 2017/10/24
Test Mode : Mode 2: Transmit - BLE (5.0)

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.62	1 Watt= 30 dBm	Pass
Channel 19	2440.00	8.65	1 Watt= 30 dBm	Pass
Channel 39	2480.00	8.87	1 Watt= 30 dBm	Pass

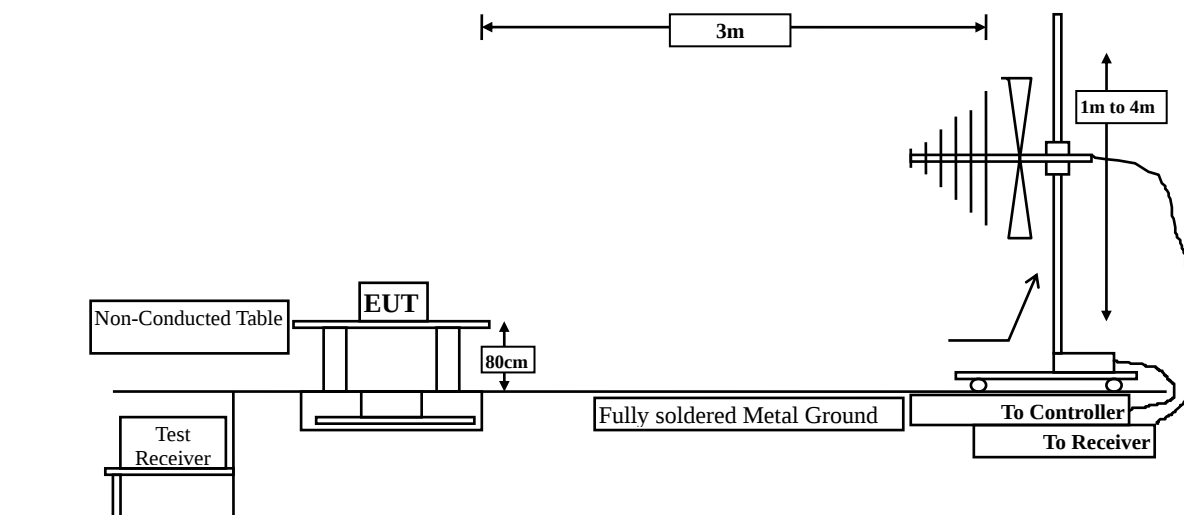
3. Radiated Emission

3.1. Test Setup

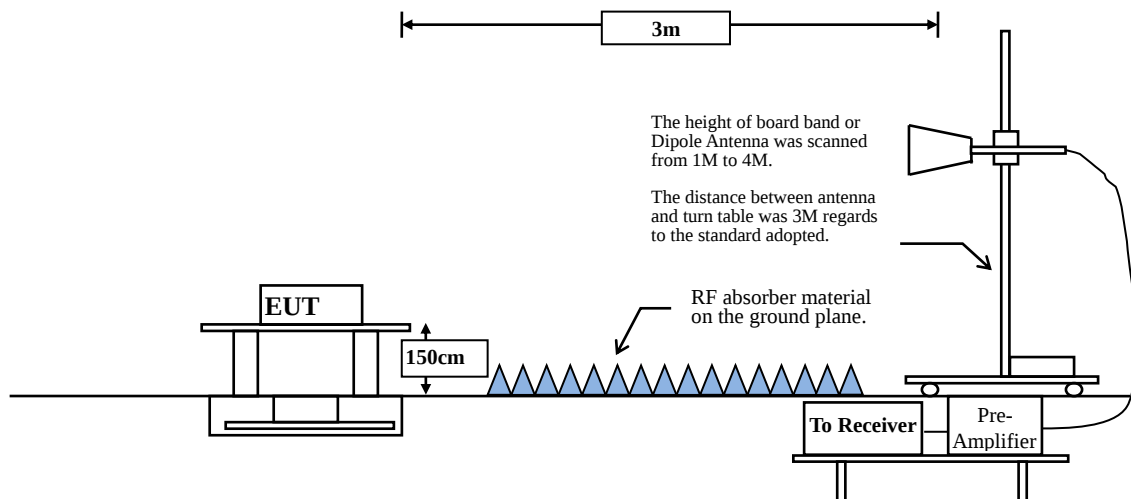
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.2. Limits

➤ General Radiated Emission 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 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.

3.3. Test Procedure

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

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

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

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

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

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

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

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

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

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

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

3.4. Uncertainty

Horizontal polarization :

30-300MHz: $\pm 4.08\text{dB}$; 300M-1GHz: $\pm 3.86\text{dB}$; 1-18GHz: $\pm 3.77\text{dB}$; 18-40GHz: $\pm 3.98\text{dB}$

Vertical polarization :

30-300MHz: $\pm 4.81\text{dB}$; 300M-1GHz: $\pm 3.87\text{dB}$; 1-18GHz : $\pm 3.83\text{dB}$; 18-40GHz: $\pm 3.98\text{dB}$

3.5. Test Result of Radiated Emission

Product : Intel® Wireless-AC 9260
 Test Item : Harmonic Radiated Emission
 Test date : 2017/10/04
 Test Mode : Mode 1: Transmit - BLE(2402MHz)

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:					
4804.000	-6.114	48.510	42.396	-31.604	74.000
7206.000	-3.112	47.510	44.398	-29.602	74.000
9608.000	-0.801	45.610	44.810	-29.190	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4804.000	-6.114	49.510	43.396	-30.604	74.000
7206.000	-3.112	45.470	42.358	-31.642	74.000
9608.000	-0.801	45.450	44.650	-29.350	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® Wireless-AC 9260
 Test Item : Harmonic Radiated Emission
 Test date : 2017/10/04
 Test Mode : Mode 1: Transmit - BLE (2440MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
4880.000	-6.069	48.610	42.541	-31.459	74.000
7320.000	-3.027	51.350	48.323	-25.677	74.000
9760.000	-0.527	44.250	43.722	-30.278	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4880.000	-6.069	49.320	43.251	-30.749	74.000
7320.000	-3.027	50.510	47.483	-26.517	74.000
9760.000	-0.527	46.620	46.092	-27.908	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® Wireless-AC 9260
 Test Item : Harmonic Radiated Emission
 Test date : 2017/10/04
 Test Mode : Mode 1: Transmit - BLE (2480MHz)

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:					
4960.000	-6.055	47.410	41.355	-32.645	74.000
7440.000	-2.861	48.210	45.348	-28.652	74.000
9920.000	-0.306	44.240	43.934	-30.066	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4960.000	-6.055	48.110	42.055	-31.945	74.000
7440.000	-2.861	48.680	45.818	-28.182	74.000
9920.000	-0.306	45.680	45.374	-28.626	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® Wireless-AC 9260
 Test Item : Harmonic Radiated Emission
 Test date : 2017/10/04
 Test Mode : Mode 2: Transmit - BLE (5.0) (2402MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level	dB	dB μ V/m
Horizontal					
Peak Detector:					
4804.000	-6.114	51.470	45.356	-28.644	74.000
7206.000	-3.112	51.750	48.638	-25.362	74.000
9608.000	-0.801	51.470	50.670	-23.330	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4804.000	-6.114	51.470	45.356	-28.644	74.000
7206.000	-3.112	51.310	48.198	-25.802	74.000
9608.000	-0.801	51.790	50.990	-23.010	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® Wireless-AC 9260
 Test Item : Harmonic Radiated Emission
 Test date : 2017/10/04
 Test Mode : Mode 2: Transmit - BLE (5.0) (2440MHz)

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:					
4880.000	-6.069	51.240	45.171	-28.829	74.000
7320.000	-3.027	51.570	48.543	-25.457	74.000
9760.000	-0.527	51.740	51.212	-22.788	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4880.000	-6.069	51.680	45.611	-28.389	74.000
7320.000	-3.027	51.470	48.443	-25.557	74.000
9760.000	-0.527	51.160	50.632	-23.368	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® Wireless-AC 9260
 Test Item : Harmonic Radiated Emission
 Test date : 2017/10/04
 Test Mode : Mode 2: Transmit - BLE (5.0) (2480MHz)

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:					
4960.000	-6.055	51.570	45.515	-28.485	74.000
7440.000	-2.861	51.370	48.508	-25.492	74.000
9920.000	-0.306	51.520	51.214	-22.786	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4960.000	-6.055	52.140	46.085	-27.915	74.000
7440.000	-2.861	51.570	48.708	-25.292	74.000
9920.000	-0.306	51.420	51.114	-22.886	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® Wireless-AC 9260
 Test Item : General Radiated Emission
 Test date : 2017/10/02
 Test Mode : Mode 1: Transmit - BLE (2440MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
162.890	-10.960	33.157	22.196	-21.304	43.500
289.960	-10.691	33.178	22.488	-23.512	46.000
397.630	-8.129	32.040	23.911	-22.089	46.000
544.100	-5.332	21.774	16.442	-29.558	46.000
709.970	-2.859	27.799	24.940	-21.060	46.000
880.690	-0.570	21.860	21.290	-24.710	46.000
Vertical					
144.460	-11.289	33.097	21.808	-21.692	43.500
242.430	-12.224	33.872	21.648	-24.352	46.000
369.500	-8.769	29.935	21.166	-24.834	46.000
511.120	-5.850	22.059	16.209	-29.791	46.000
686.690	-3.237	26.641	23.403	-22.597	46.000
871.960	-0.682	18.973	18.291	-27.709	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® Wireless-AC 9260
 Test Item : General Radiated Emission
 Test date : 2017/10/02
 Test Mode : Mode 2: Transmit - BLE (5.0) (2440MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
158.040	-10.904	34.410	23.506	-19.994	43.500
256.010	-12.040	33.590	21.549	-24.451	46.000
378.230	-8.571	33.577	25.006	-20.994	46.000
539.250	-5.409	25.400	19.991	-26.009	46.000
729.370	-2.482	28.399	25.917	-20.083	46.000
885.540	-0.508	23.985	23.477	-22.523	46.000
Vertical					
145.430	-11.255	33.329	22.073	-21.427	43.500
272.500	-11.244	34.092	22.848	-23.152	46.000
385.020	-8.416	26.034	17.618	-28.382	46.000
521.790	-5.683	23.425	17.742	-28.258	46.000
692.510	-3.156	27.034	23.878	-22.122	46.000
824.430	-1.351	21.240	19.889	-26.111	46.000

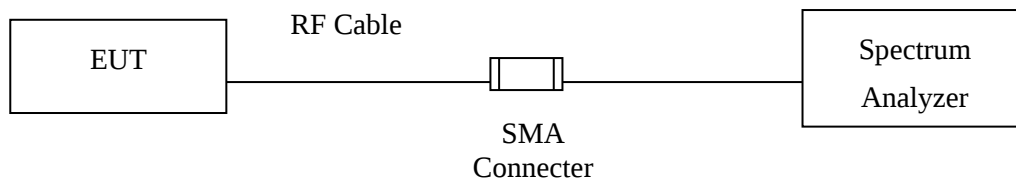
Note:

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

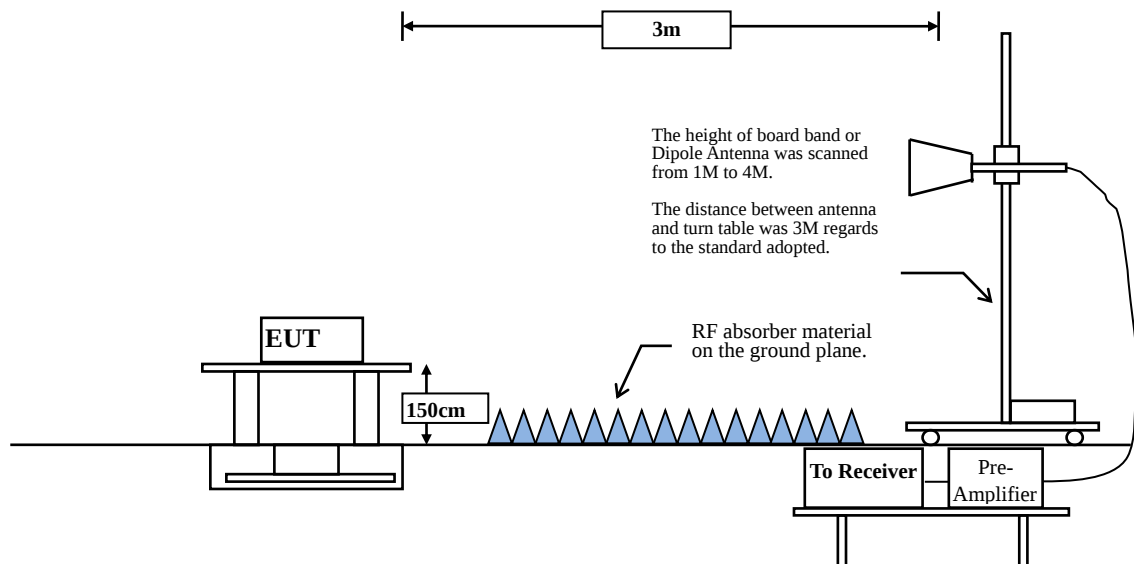
4.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz



4.2. Limit

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.3. Test Procedure

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

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

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

4.4. Uncertainty

Horizontal polarization : 1-18GHz: ± 3.77 dB

Vertical polarization : 1-18GHz : ± 3.83 dB

4.5. Test Result of Band Edge

Product : Intel® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 1: Transmit - BLE

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
00 (Peak)	2387.826	12.142	31.410	43.552	74.00	54.00	Pass
00 (Peak)	2390.000	12.148	30.207	42.355	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	55.931	68.107	--	--	--
00 (Peak)	2402.029	12.182	86.615	98.796	--	--	--
00 (Average)	2390.000	12.148	18.053	30.201	74.00	54.00	Pass
00 (Average)	2400.000	12.176	46.212	58.388	--	--	--
00 (Average)	2402.029	12.182	85.984	98.165	--	--	--

Figure Channel 00:

Horizontal (Peak)

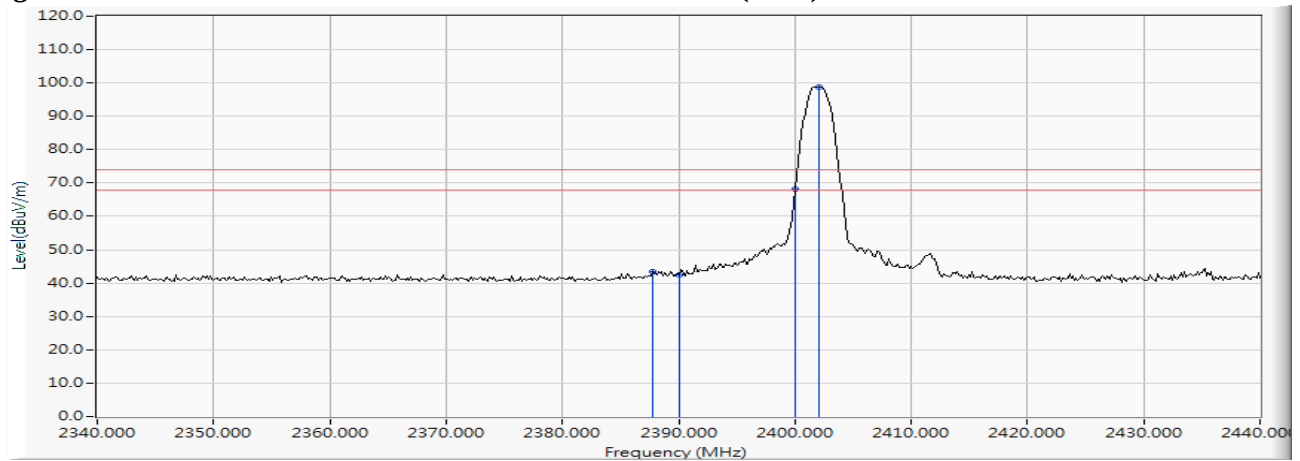
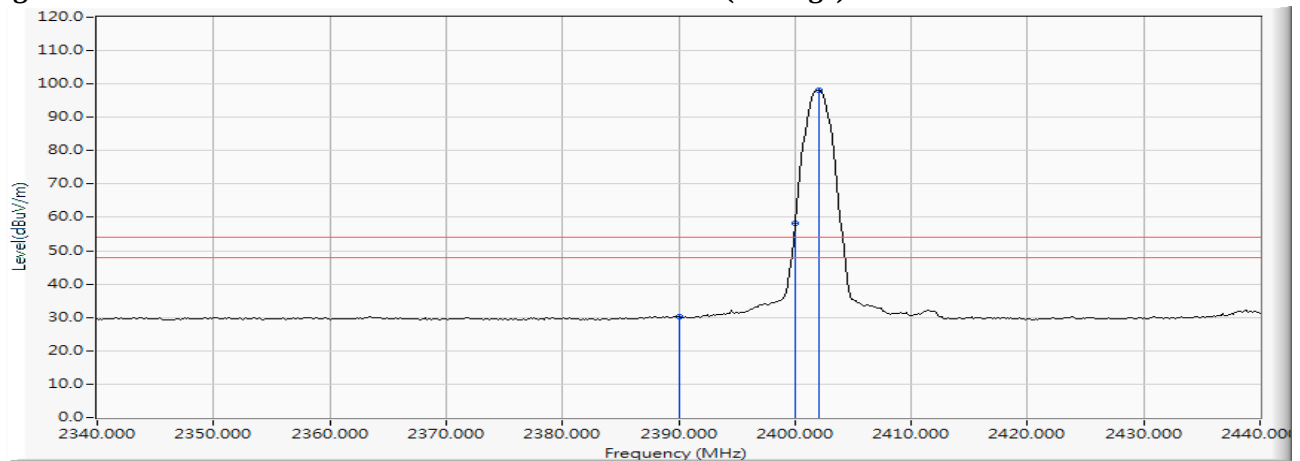


Figure Channel 00:

Horizontal (Average)



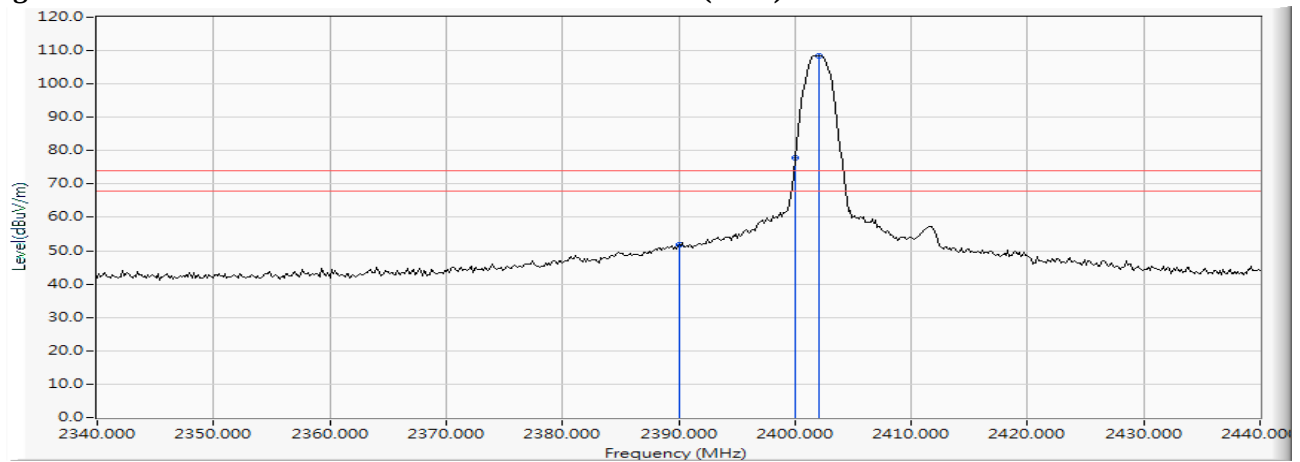
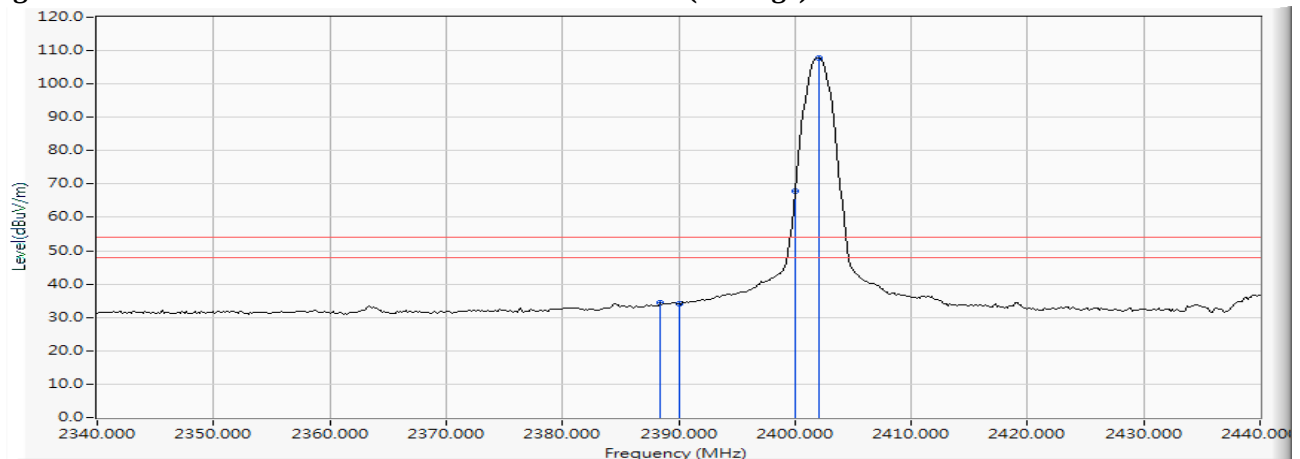
Note:

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 1: Transmit - BLE

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
00 (Peak)	2390.000	12.148	39.526	51.674	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	65.609	77.785	--	--	--
00 (Peak)	2402.029	12.182	96.251	108.432	--	--	--
00 (Average)	2388.406	12.144	22.135	34.279	74.00	54.00	Pass
00 (Average)	2390.000	12.148	22.024	34.172	74.00	54.00	Pass
00 (Average)	2400.000	12.176	55.604	67.780	--	--	--
00 (Average)	2402.029	12.182	95.630	107.811	--	--	--

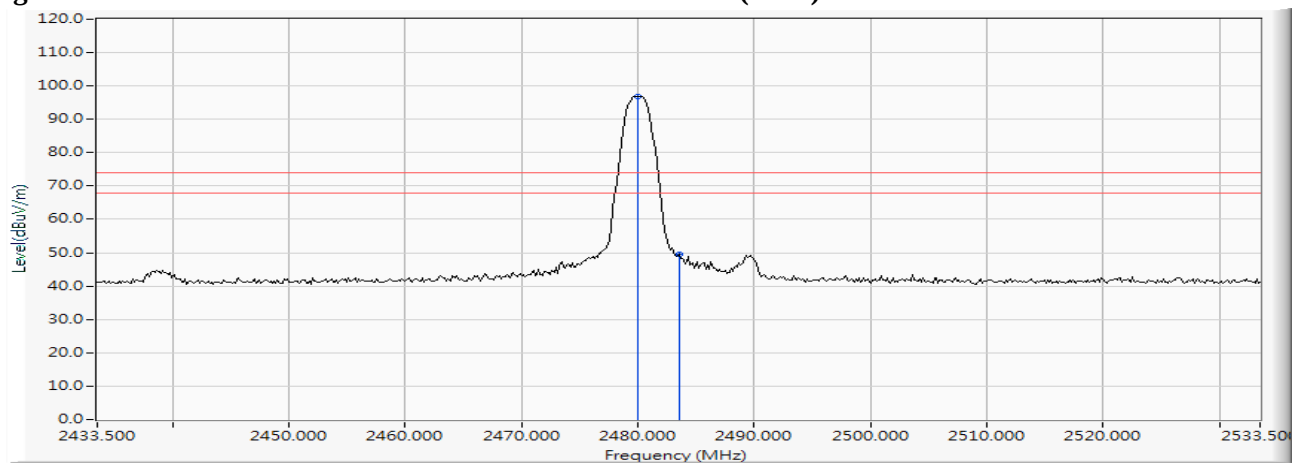
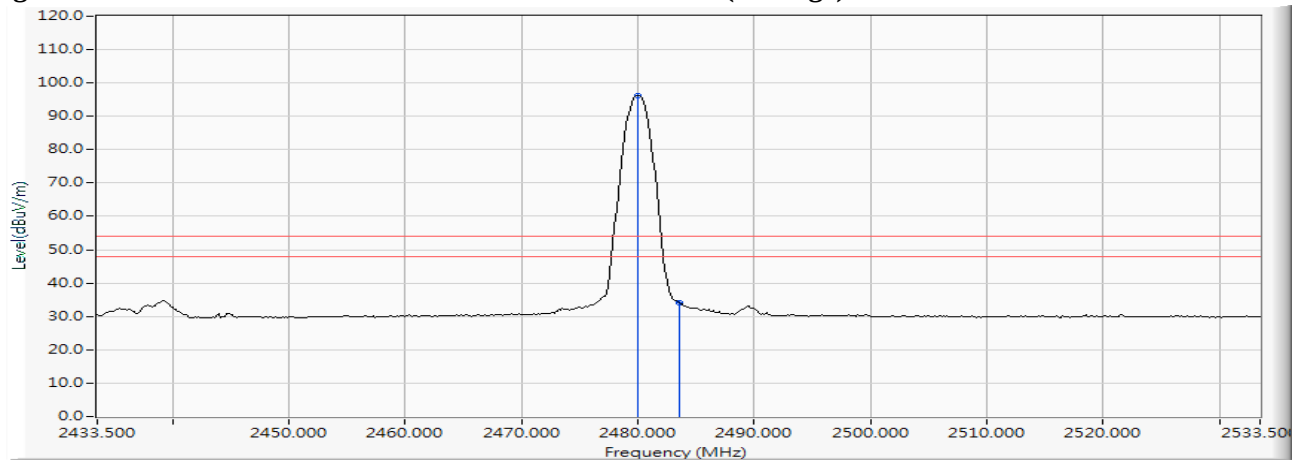
Figure Channel 00:**Vertical (Peak)****Figure Channel 00:****Vertical (Average)****Note:**

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 1: Transmit - BLE

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
39 (Peak)	2480.022	12.393	84.463	96.856	--	--	--
39 (Peak)	2483.500	12.403	37.034	49.437	74.00	54.00	Pass
39 (Average)	2480.022	12.393	83.872	96.265	--	--	--
39 (Average)	2483.500	12.403	21.780	34.183	74.00	54.00	Pass

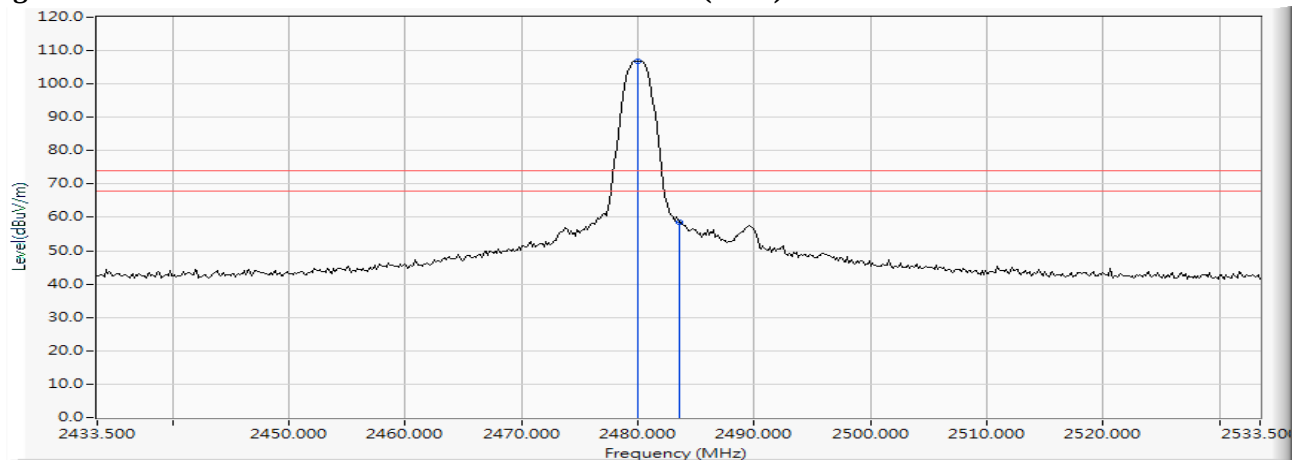
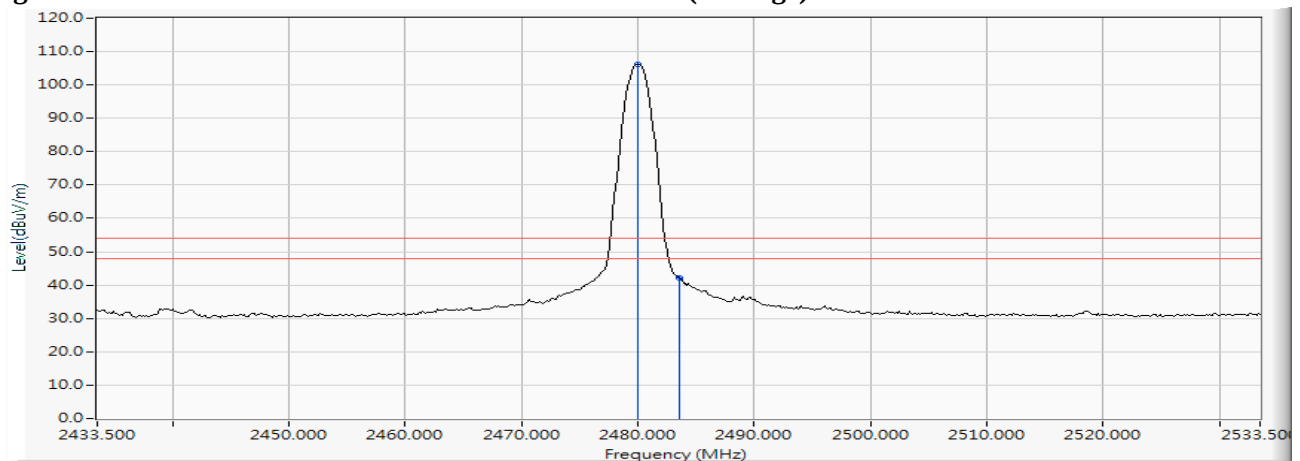
Figure Channel 39: Horizontal (Peak)**Figure Channel 39: Horizontal (Average)****Note:**

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 1: Transmit - BLE

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
39 (Peak)	2480.022	12.393	94.418	106.811	--	--	--
39 (Peak)	2483.500	12.403	46.258	58.661	74.00	54.00	Pass
39 (Average)	2480.022	12.393	93.806	106.199	--	--	--
39 (Average)	2483.500	12.403	29.678	42.081	74.00	54.00	Pass

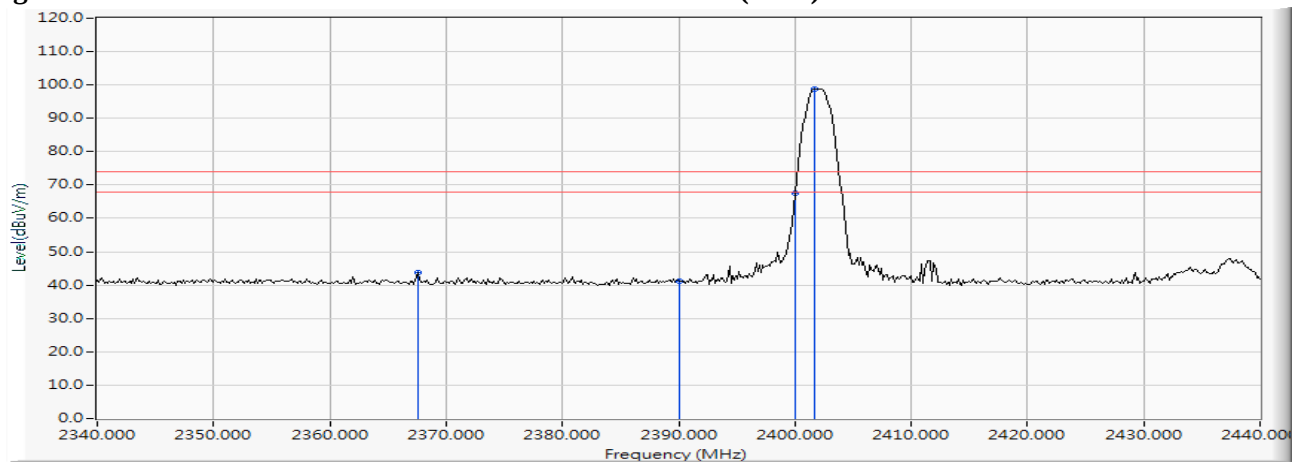
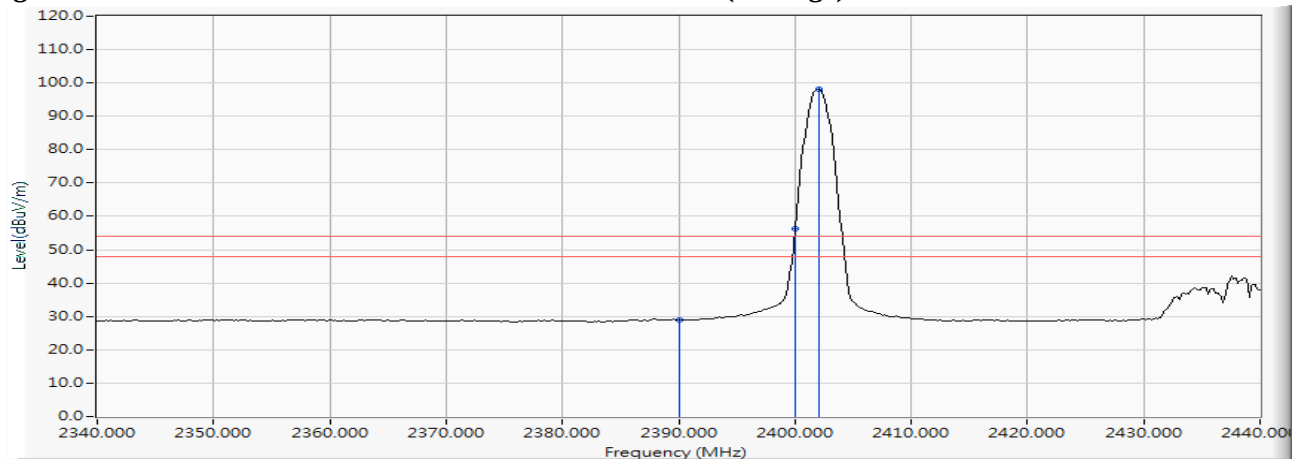
Figure Channel 39: Vertical (Peak)**Figure Channel 39: Vertical (Average)****Note:**

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 2: Transmit - BLE (5.0)

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
00 (Peak)	2367.536	12.085	31.721	43.805	74.00	54.00	Pass
00 (Peak)	2390.000	12.148	28.894	41.042	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	55.457	67.633	--	--	--
00 (Peak)	2401.739	12.180	86.581	98.762	--	--	--
00 (Average)	2390.000	12.148	16.810	28.958	74.00	54.00	Pass
00 (Average)	2400.000	12.176	44.171	56.347	--	--	--
00 (Average)	2402.029	12.182	85.924	98.105	--	--	--

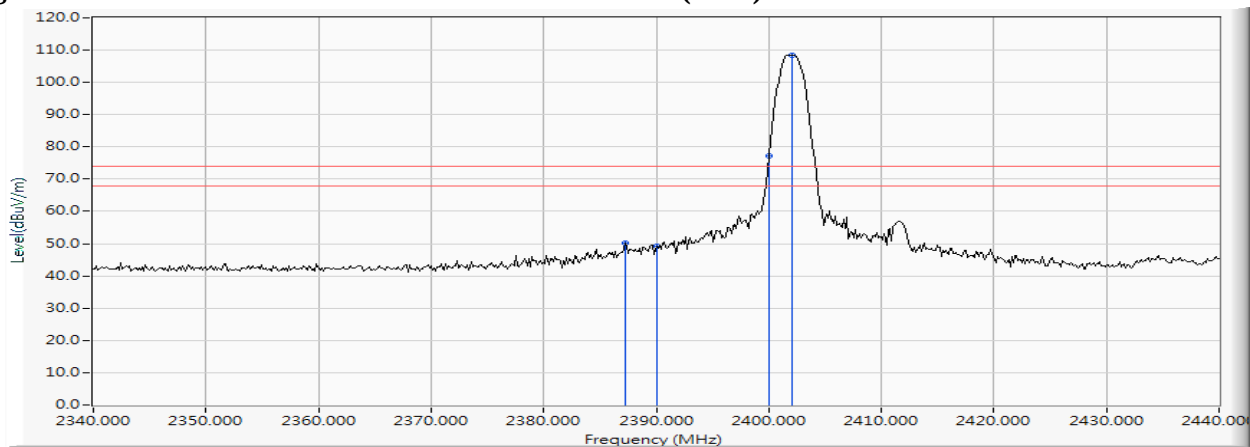
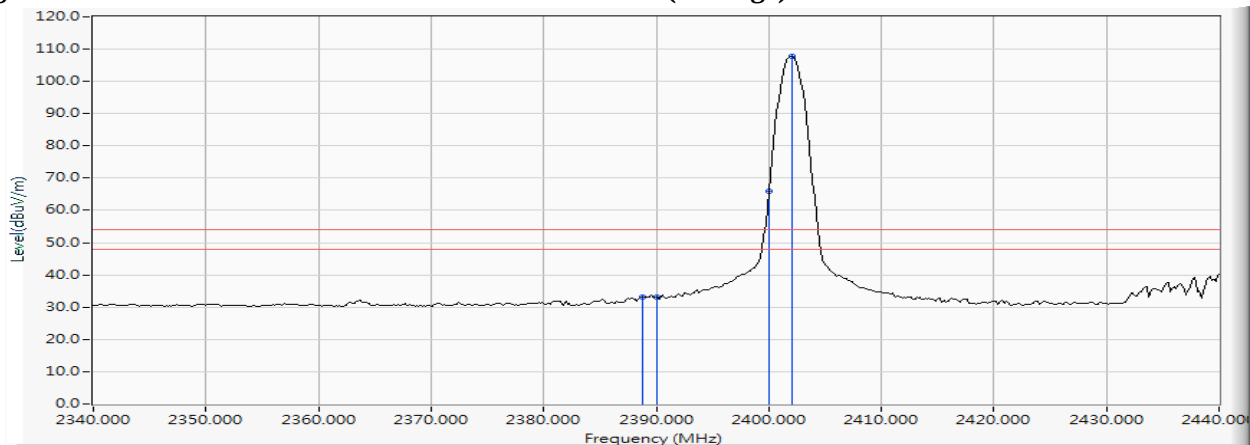
Figure Channel 00:**Horizontal (Peak)****Figure Channel 00:****Horizontal (Average)****Note:**

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 2: Transmit - BLE (5.0)

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
00 (Peak)	2387.246	12.140	37.959	50.099	74.00	54.00	Pass
00 (Peak)	2390.000	12.148	36.921	49.069	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	64.922	77.098	--	--	--
00 (Peak)	2402.029	12.182	96.252	108.433	--	--	--
00 (Average)	2388.841	12.145	21.114	33.259	74.00	54.00	Pass
00 (Average)	2390.000	12.148	21.080	33.228	74.00	54.00	Pass
00 (Average)	2400.000	12.176	53.692	65.868	--	--	--
00 (Average)	2402.029	12.182	95.579	107.760	--	--	--

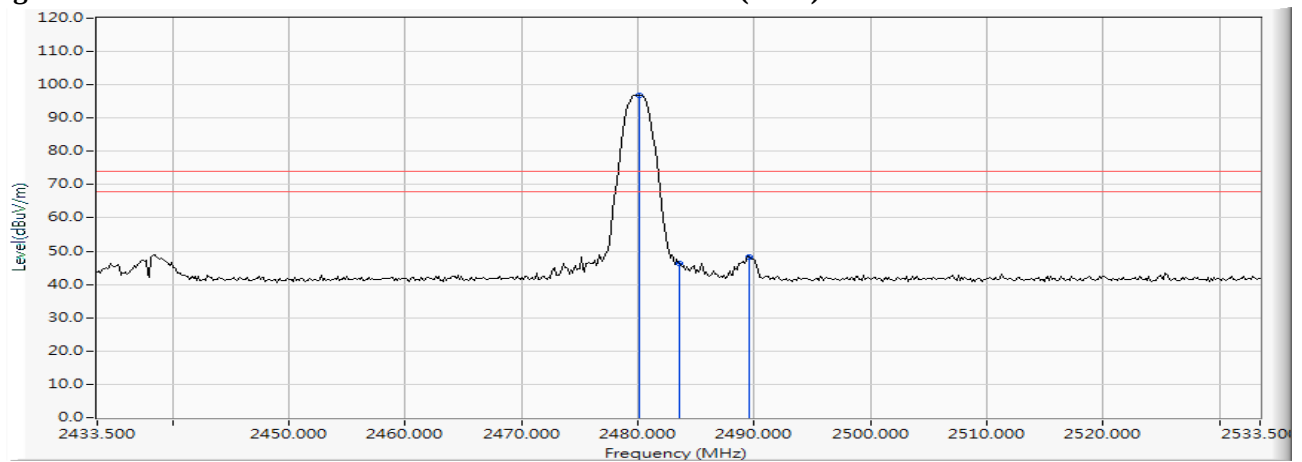
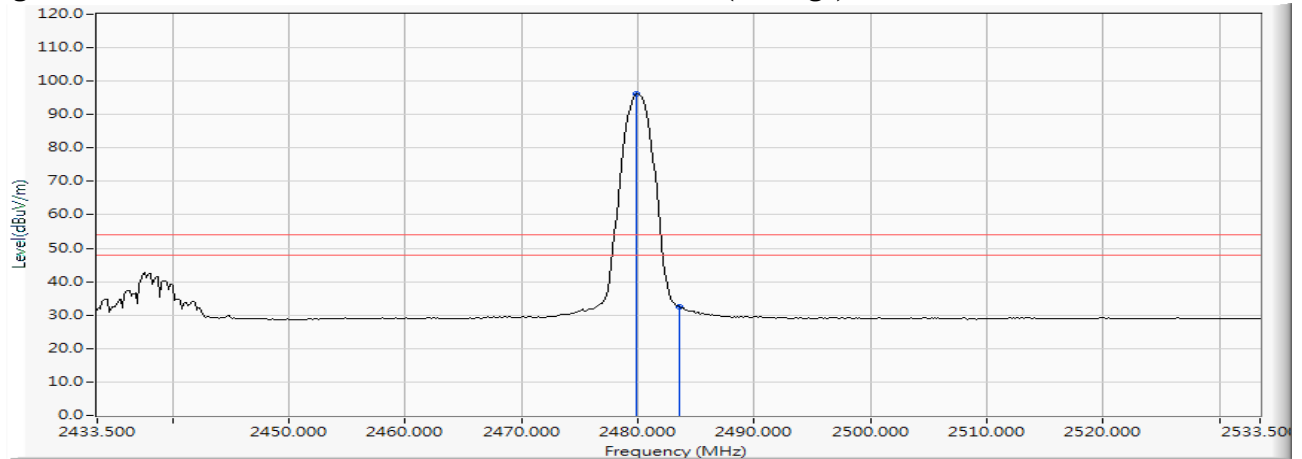
Figure Channel 00:**Vertical (Peak)****Figure Channel 00:****Vertical (Average)****Note:**

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 2: Transmit - BLE (5.0)

RF Radiated Measurement (Horizontal):

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
39 (Peak)	2480.167	12.394	84.400	96.793	--	--	--
39 (Peak)	2483.500	12.403	33.960	46.363	74.00	54.00	Pass
39 (Peak)	2489.587	12.419	35.870	48.289	74.00	54.00	Pass
39 (Average)	2479.877	12.393	83.714	96.107	--	--	--
39 (Average)	2483.500	12.403	20.098	32.501	74.00	54.00	Pass

Figure Channel 39: Horizontal (Peak)

Figure Channel 39: Horizontal (Average)


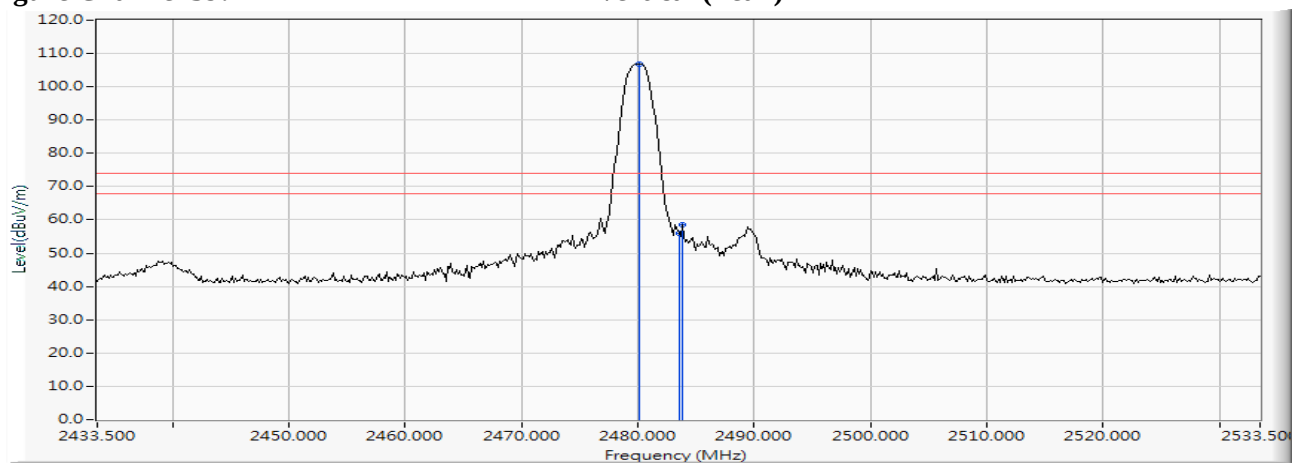
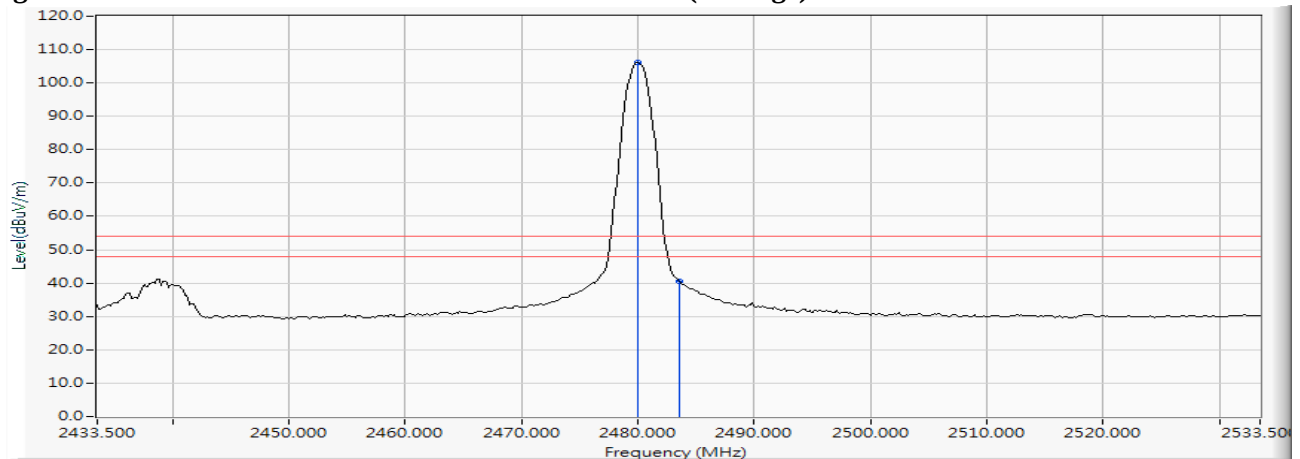
Note:

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® Wireless-AC 9260
 Test Item : Band Edge
 Test date : 2017/09/21
 Test Mode : Mode 2: Transmit - BLE (5.0)

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
39 (Peak)	2480.167	12.394	94.377	106.770	--	--	--
39 (Peak)	2483.500	12.403	43.666	56.069	74.00	54.00	Pass
39 (Peak)	2483.790	12.403	46.042	58.445	74.00	54.00	Pass
39 (Average)	2480.022	12.393	93.713	106.106	--	--	--
39 (Average)	2483.500	12.403	28.271	40.674	74.00	54.00	Pass

Figure Channel 39:**Vertical (Peak)****Figure Channel 39:****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.