

# FCC Test Report

## (Class II Permissive Change)

|              |                         |
|--------------|-------------------------|
| Product Name | Intel® Wireless-AC 9560 |
| Model No.    | 9560NGW                 |
| FCC ID.      | 2ANPM9560NG             |

|           |   |
|-----------|---|
| Applicant | Nexstgo Company Limited   |
| Address   | FLAT/RM 1602 16/F ENTERPRISE SQUARE TOWER II NO.9<br>SHEUNG YUET ROAD, KOWLOON BAY, Hong Kong |

|                 |                       |
|-----------------|-----------------------|
| Date of Receipt | Oct. 24, 2018         |
| Issued Date     | Dec. 10, 2018         |
| Report No.      | 18A0330R-RFUSP12V00-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.

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# Test Report

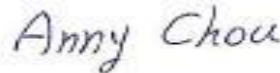
Issued Date: Dec. 10, 2018

Report No.: 18A0330R-RFUSP12V00-C



|                     |   |
|---------------------|---|
| Product Name        | Intel® Wireless-AC 9560   |
| Applicant           | Nexstgo Company Limited   |
| Address             | FLAT/RM 1602 16/F ENTERPRISE SQUARE TOWER II NO.9 SHEUNG<br>YUET ROAD, KOWLOON BAY, Hong Kong                           |
| Manufacturer        | Intel Mobile Communications France SAS  |
| Model No.           | 9560NGW   |
| FCC ID.             | 2ANPM9560NG   |
| 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: 2017<br>ANSI C63.4: 2014, ANSI C63.10: 2013<br>KDB 558074 D01 DTS Meas Guidance v05 |
| Test Result         | Complied  |

Documented By :



( Senior Adm. Specialist / Anny Chou )

Tested By :



( Assistant Engineer / Yunche Chen )

Approved By :



( Director / Vincent Lin )

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## 1. GENERAL INFORMATION

### 1.1. EUT Description

|                    |                                   |
|--------------------|-----------------------------------|
| Product Name       | Intel® Wireless-AC 9560           |
| Trade Name         | Intel                             |
| Model No.          | 9560NGW                           |
| FCC ID.            | 2ANPM9560NG                       |
| Frequency Range    | 2402 – 2480MHz                    |
| Channel Number     | V5.0: 40CH                        |
| Type of Modulation | V5.0: GFSK                        |
| Antenna Type       | PIFA/SLOT Antenna                 |
| Channel Control    | Auto                              |
| Antenna Gain       | Refer to the table “Antenna List” |
| Test Platform.     | Brand Name: Nexstgo, M/N: NZ14N1  |

#### Antenna List:

| No. | Manufacturer                                | Part No.            | Antenna Type | Peak Gain            |
|-----|---|---------------------|--------------|----------------------|
| 1   | Jieng Tai International<br>Electronic Corp. | JT1805YY0311 (Main) | PIFA         | -0.88 dBi for 2.4GHz |
|     |   | JT1805YY1511 (Aux)  |              |                      |
| 2   | Well Green Technology<br>Co., LTD.          | SNSUPWIPB01 (Main)  | SLOT         | -0.07 dBi for 2.4GHz |
|     |   | SNSUPWIPB03 (Aux)   |              |                      |

Note : (1)The antenna of EUT is conform to FCC 15.203.

(2) Well Green Technology antenna(No2) was tested and recorded in this report since it represents different Antenna Type.

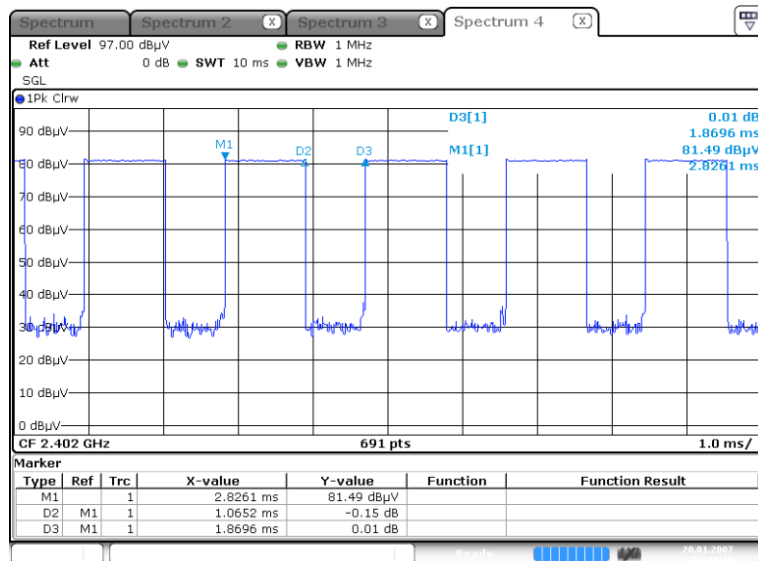
## Center Frequency of Each Channel:

| 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  |

## Duty Cycle:

|     |      |
|-----|------|
| BLE | 0.57 |
|-----|------|

\*Duty cycle = Ton / (Ton + Toff)



Date: 20.JAN.2007 04:40:16

Note:

1. The EUT is an Intel® Wireless-AC 9560 with a built-in WLAN 、Bluetooth transceiver, this report for Bluetooth V5.0.
2. 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.
3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. This is to request a Class II permissive change for FCC ID: 2ANPM9560NG, originally granted on 11/20/2018.

The major change filed under this application is:

Change #1: Additional Chassis added, Nexstgo, model number: NZ14N1.

Change #2: Add two new antennas, the antenna type(Slot antenna) of Antenna List ( No. 2) is different than the original application, the type(PIFA antenna) of Antenna List ( No. 1) is the same as the original application . And the gains of all antennas are lower than the original application.

|           |                               |
|-----------|-------------------------------|
| Test Mode | Mode 1: Transmit - BLE (GFSK) |
|-----------|-------------------------------|

## 1.2. Operational Description

The EUT is an Intel® Wireless-AC 9560 with built-in 2.4GHz and 5GHz WLAN 、 Bluetooth transceiver. The number of the channels is 40 in Bluetooth V5.0 mode. This device provides GFSK modulation.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. The transmitter is presented with a continuous data stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its 40 channels.

The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted.

The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

The EUT is forward-compatible with the impending Bluetooth Low Energy operating mode, which provides a dramatic reduction in the power consumption of the Bluetooth radio and baseband. The primary application for this mode is to provide support for low data rate devices, such as sensors and remote controls.

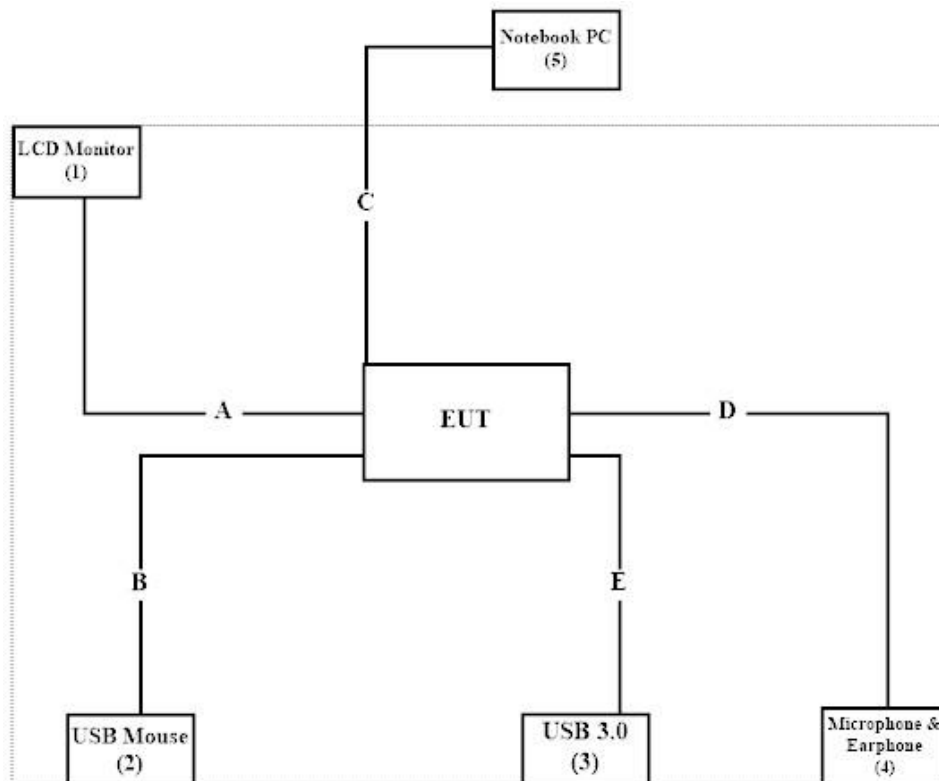
### 1.3. Tested System Details

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 LCD Monitor           | ASUS         | VS229HA       | F4LMQS135395 | N/A        |
| 2 USB Mouse             | Logitech     | M-U0026       | 1245HS0684K8 | N/A        |
| 3 USB 3.0(1T)           | Transcend    | TS1TSJ25M3    | C13890-3746  | N/A        |
| 4 Microphone & Earphone | Ergotech     | E201          | N/A          | N/A        |
| 5 Notebook PC           | DELL         | Latitude 5580 | 2HRD7H2      | N/A        |

| Signal Cable Type  | Signal cable Description |
|--------------------|--------------------------|
| A HDMI Cable       | Non-shielded, 1.6m       |
| B Mouse Cable      | Non-shielded, 1.7m       |
| C USB to LAN Cable | Non-shielded, 0.15m      |
| D Earphone Cable   | Non-shielded, 1.9m       |
| E USB Cable        | Non-shielded, 0.2m       |

### 1.4. Configuration of Tested System





## **1.5. EUT Exercise Software**

- (1) Setup the EUT as shown on 1.4
- (2) Execute software “DRTU ( Ver 11.1812.0-07258)” on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start the continuous transmission.
- (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 DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/chinese/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: [http:// www.dekra.com.tw](http://www.dekra.com.tw)

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Accredited Number: 3023

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E-Mail : [info.tw@dekra.com](mailto:info.tw@dekra.com)

FCC Accreditation Number: TW3023

## 1.7. List of Test Item and Equipment

### For Conducted measurements /CB3/SR8

|   | Equipment             | Manufacturer | Model No. | Serial No.   | Cali. Date | Due. Date  |
|---|-----------------------|--------------|-----------|--------------|------------|------------|
|   | Temperature Chamber   | WIT GROUP    | TH-1S-B   | EQ-201-00146 | 2018/02/12 | 2019/02/11 |
| X | Spectrum Analyzer     | Agilent      | N9010A    | MY53470892   | 2018/09/27 | 2019/09/26 |
| X | Peak Power Analyzer   | Keysight     | 8990B     | MY51000410   | 2018/08/01 | 2019/07/31 |
| X | Wideband Power Sensor | Keysight     | N1923A    | MY56080003   | 2018/07/25 | 2019/07/24 |
| X | Wideband Power Sensor | Keysight     | N1923A    | MY56080004   | 2018/07/25 | 2019/07/24 |
|   | EMI Test Receiver     | R&S          | ESCS 30   | 100369       | 2018/11/19 | 2019/11/18 |
|   | LISN                  | R&S          | ESH3-Z5   | 836679/017   | 2018/02/09 | 2019/02/08 |
|   | LISN                  | R&S          | ENV216    | 100097       | 2018/02/09 | 2019/02/08 |
|   | Coaxial Cable         | DEKRA        | RG 400    | LC018-RG     | 2018/06/21 | 2019/06/20 |

### For Radiated measurements /Site3/CB8

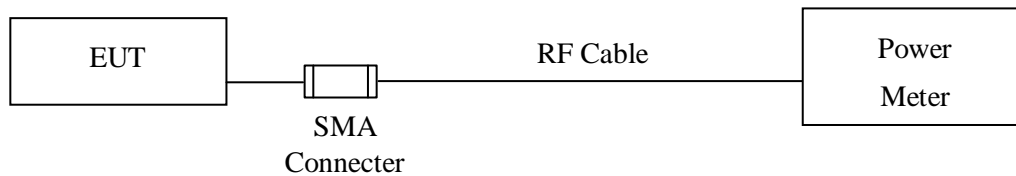
|   | Equipment         | Manufacturer    | Model No.   | Serial No.     | Cali. Date | Due. Date  |
|---|-------------------|-----------------|-------------|----------------|------------|------------|
| X | Spectrum Analyzer | R&S             | FSP40       | 100170         | 2018/03/12 | 2019/03/11 |
|   | Loop Antenna      | Teseq           | HLA6121     | 37133          | 2017/10/13 | 2019/10/12 |
| X | Bilog Antenna     | Schaffner Chase | CBL6112B    | 2707           | 2018/06/24 | 2019/06/23 |
| X | Coaxial Cable     | DEKRA           | RG 214      | LC003-RG       | 2018/06/14 | 2019/06/13 |
| X | Pre-Amplifier     | Jet-Power       | JPA-10M1G33 | 17010100033001 | 2018/06/14 | 2019/06/13 |
| X | Horn Antenna      | ETS-Lindgren    | 3117        | 00135205       | 2018/05/03 | 2019/05/02 |
| X | Horn Antenna      | SCHWARZBECK     | 9120D       | 576            | 2018/11/30 | 2019/11/29 |
| X | Pre-Amplifier     | EMCI            | EMC012630SE | 980210         | 2018/04/10 | 2019/04/09 |
|   | Horn Antenna      | Com-Power       | AH-840      | 101043         | 2018/01/09 | 2019/01/08 |
|   | Amplifier + Cable | EMCI            | EMC184045SE | 980370         | 2018/03/21 | 2019/03/20 |
| X | Filter            | MICRO-TRONIC    | BRM50702    | G270           | 2018/08/06 | 2019/08/05 |
|   | Filter            | MICRO-TRONIC    | BRM50716    | G196           | 2018/08/06 | 2019/08/05 |

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 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 8.3.1.3 PKPM1 Peak power meter method.

### 2.4. Uncertainty

$\pm 1.27$  dB

## 2.5. Test Result of Peak Power Output

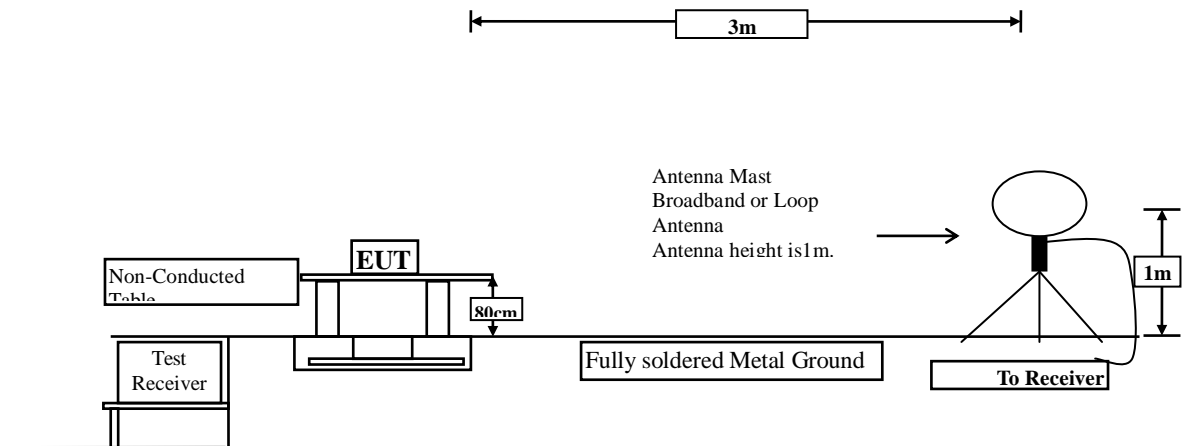
Product : Intel® Wireless-AC 9560  
Test Item : Peak Power Output  
Test Site : No.3 OATS  
Test date : 2018/11/23  
Test Mode : Mode 1: Transmit - BLE (GFSK)

| Channel No. | Frequency<br>(MHz) | Measurement<br>(dBm) | Required Limit | Result |
|-------------|--------------------|----------------------|----------------|--------|
| Channel 00  | 2402.00            | 8.53                 | 1 Watt= 30 dBm | Pass   |
| Channel 19  | 2440.00            | 8.82                 | 1 Watt= 30 dBm | Pass   |
| Channel 39  | 2480.00            | 9.13                 | 1 Watt= 30 dBm | Pass   |

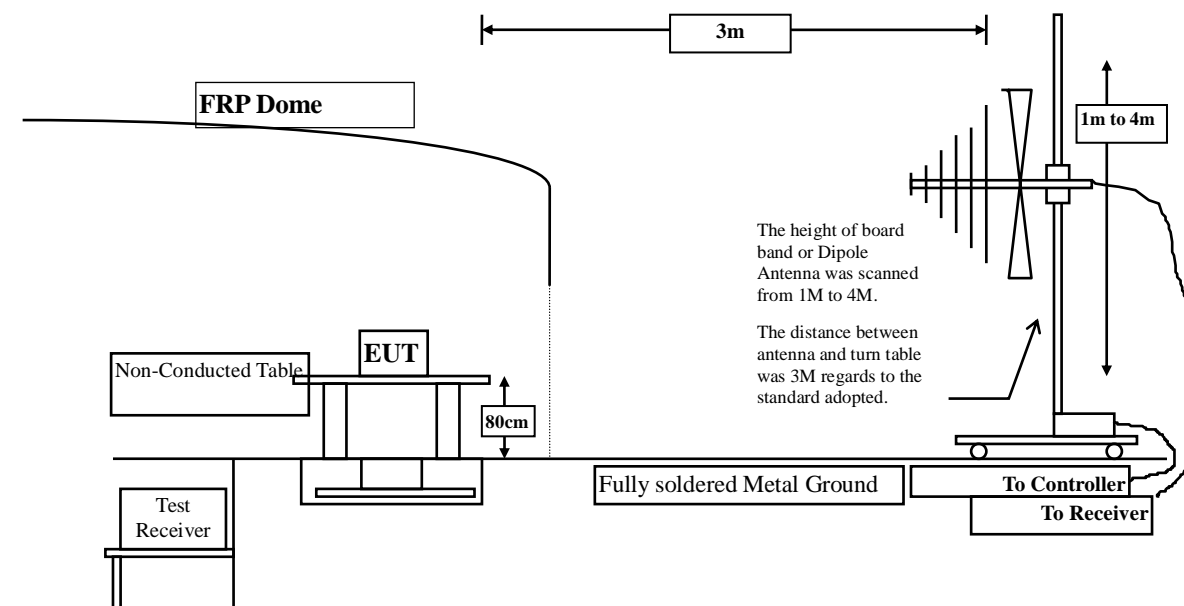
### 3. Radiated Emission

#### 3.1. Test Setup

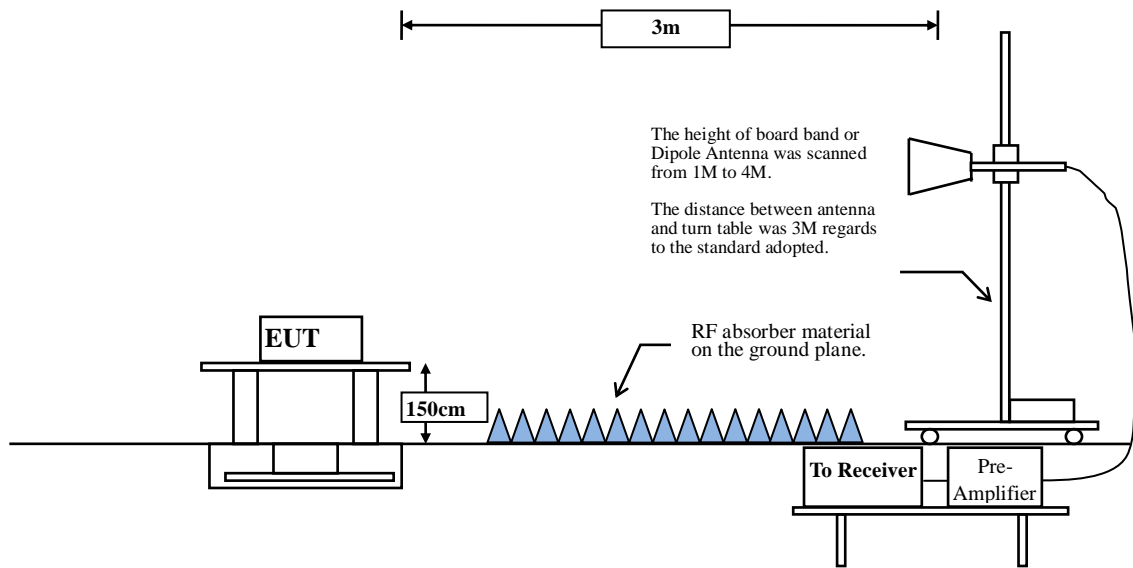
Under 30MHz



Below 1GHz



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 (dBuV) = 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.

The average measurement tested according to KDB 558074 section 12.2.5.3. Reduced VBW averaging across on- and off-times of the EUT transmissions with max hold.

$VBW \geq 1/T$ :

| T      | 1/T | VBW Setting |
|--------|-----|-------------|
| 1.0652 | 939 | 1000        |

### 3.4. Uncertainty

± 4.08 dB above 1GHz

± 4.22 dB below 1GHz



### 3.5. Test Result of Radiated Emission

Product : Intel® Wireless-AC 9560  
 Test Item : Harmonic Radiated Emission  
 Test Site : No.8 CB  
 Test date : 2018/11/22  
 Test Mode : Mode 1: Transmit - BLE (GFSK)(2402MHz)

| Frequency<br>MHz      | Correct<br>Factor<br>dB | Reading<br>Level<br>dBuV | Measurement<br>Level<br>dBuV/m | Margin<br>dB | Limit<br>dBuV/m |
|-----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| <b>Horizontal</b>     |                         |                          |                                |              |                 |
| <b>Peak Detector:</b> |                         |                          |                                |              |                 |
| 4804.000              | -9.896                  | 48.380                   | 38.484                         | -35.516      | 74.000          |
| 7206.000              | -5.013                  | 46.680                   | 41.667                         | -32.333      | 74.000          |
| 9608.000              | -1.472                  | 43.810                   | 42.339                         | -31.661      | 74.000          |
| <b>Average</b>        |                         |                          |                                |              |                 |
| <b>Detector:</b>      |                         |                          |                                |              |                 |
| --                    | --                      | --                       | --                             | --           | 54.000          |
| <b>Vertical</b>       |                         |                          |                                |              |                 |
| <b>Peak Detector:</b> |                         |                          |                                |              |                 |
| 4804.000              | -6.585                  | 47.920                   | 41.335                         | -32.665      | 74.000          |
| 7206.000              | -4.144                  | 47.630                   | 43.486                         | -30.514      | 74.000          |
| 9608.000              | -1.075                  | 43.940                   | 42.866                         | -31.134      | 74.000          |
| <b>Average</b>        |                         |                          |                                |              |                 |
| <b>Detector:</b>      |                         |                          |                                |              |                 |
| --                    | --                      | --                       | --                             | --           | 54.000          |

Note:

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

Product : Intel® Wireless-AC 9560  
 Test Item : Harmonic Radiated Emission  
 Test Site : No.8 CB  
 Test date : 2018/11/22  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2440MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 4880.000              | -10.307 | 46.310  | 36.003      | -37.997 | 74.000 |
| 7320.000              | -3.857  | 47.580  | 43.723      | -30.277 | 74.000 |
| 9760.000              | -2.579  | 43.080  | 40.502      | -33.498 | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    | --      | --      | --          | --      | 54.000 |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 4880.000              | -10.307 | 46.190  | 35.883      | -38.117 | 74.000 |
| 7320.000              | -2.987  | 47.590  | 44.603      | -29.397 | 74.000 |
| 9760.000              | -2.107  | 42.530  | 40.423      | -33.577 | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    | --      | --      | --          | --      | 54.000 |

## Note:

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

Product : Intel® Wireless-AC 9560  
 Test Item : Harmonic Radiated Emission  
 Test Site : No.8 CB  
 Test date : 2018/11/22  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2480MHz)

| Frequency<br>MHz      | Correct<br>Factor<br>dB | Reading<br>Level<br>dBuV | Measurement<br>Level<br>dBuV/m | Margin<br>dB | Limit<br>dBuV/m |
|-----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| <b>Horizontal</b>     |                         |                          |                                |              |                 |
| <b>Peak Detector:</b> |                         |                          |                                |              |                 |
| 4960.000              | -10.666                 | 45.770                   | 35.105                         | -38.895      | 74.000          |
| 7440.000              | -3.631                  | 47.310                   | 43.679                         | -30.321      | 74.000          |
| 9920.000              | -2.397                  | 45.810                   | 43.413                         | -30.587      | 74.000          |
| <b>Average</b>        |                         |                          |                                |              |                 |
| <b>Detector:</b>      |                         |                          |                                |              |                 |
| --                    |                         |                          |                                |              |                 |
| <b>Vertical</b>       |                         |                          |                                |              |                 |
| <b>Peak Detector:</b> |                         |                          |                                |              |                 |
| 4960.000              | -10.666                 | 47.000                   | 36.335                         | -37.665      | 74.000          |
| 7440.000              | -3.631                  | 46.533                   | 42.902                         | -31.098      | 74.000          |
| 9920.000              | -1.895                  | 45.870                   | 43.975                         | -30.025      | 74.000          |
| <b>Average</b>        |                         |                          |                                |              |                 |
| <b>Detector:</b>      |                         |                          |                                |              |                 |
| --                    |                         |                          |                                |              |                 |

## Note:

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

Product : Intel® Wireless-AC 9560  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test date : 2018/11/28  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2440MHz)

| Frequency<br>MHz  | Correct<br>Factor<br>dB | Reading<br>Level<br>dBuV | Measurement<br>Level<br>dBuV/m | Margin<br>dB | Limit<br>dBuV/m |
|-------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| <b>Horizontal</b> |                         |                          |                                |              |                 |
| 167.740           | -19.058                 | 55.616                   | 36.558                         | -6.942       | 43.500          |
| 278.320           | -15.722                 | 49.150                   | 33.428                         | -12.572      | 46.000          |
| 455.830           | -7.401                  | 43.336                   | 35.935                         | -10.065      | 46.000          |
| 504.330           | -7.456                  | 48.766                   | 41.310                         | -4.690       | 46.000          |
| 792.420           | -3.664                  | 39.778                   | 36.114                         | -9.886       | 46.000          |
| 959.260           | -3.413                  | 37.056                   | 33.643                         | -12.357      | 46.000          |
| <b>Vertical</b>   |                         |                          |                                |              |                 |
| 167.740           | -13.748                 | 51.780                   | 38.032                         | -5.468       | 43.500          |
| 250.190           | -14.175                 | 53.094                   | 38.919                         | -7.081       | 46.000          |
| 480.080           | -12.836                 | 53.356                   | 40.520                         | -5.480       | 46.000          |
| 504.330           | -9.526                  | 51.149                   | 41.623                         | -4.377       | 46.000          |
| 696.390           | -8.718                  | 38.904                   | 30.186                         | -15.814      | 46.000          |
| 961.200           | -6.742                  | 36.320                   | 29.578                         | -24.422      | 54.000          |

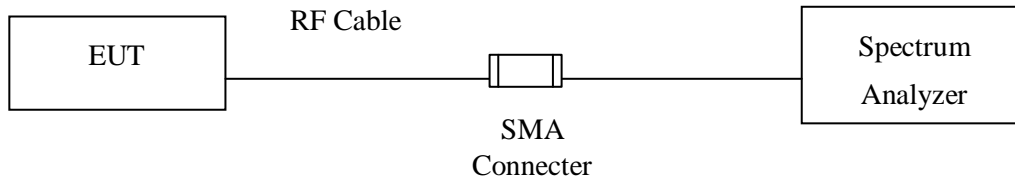
## Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 1 KHz, 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

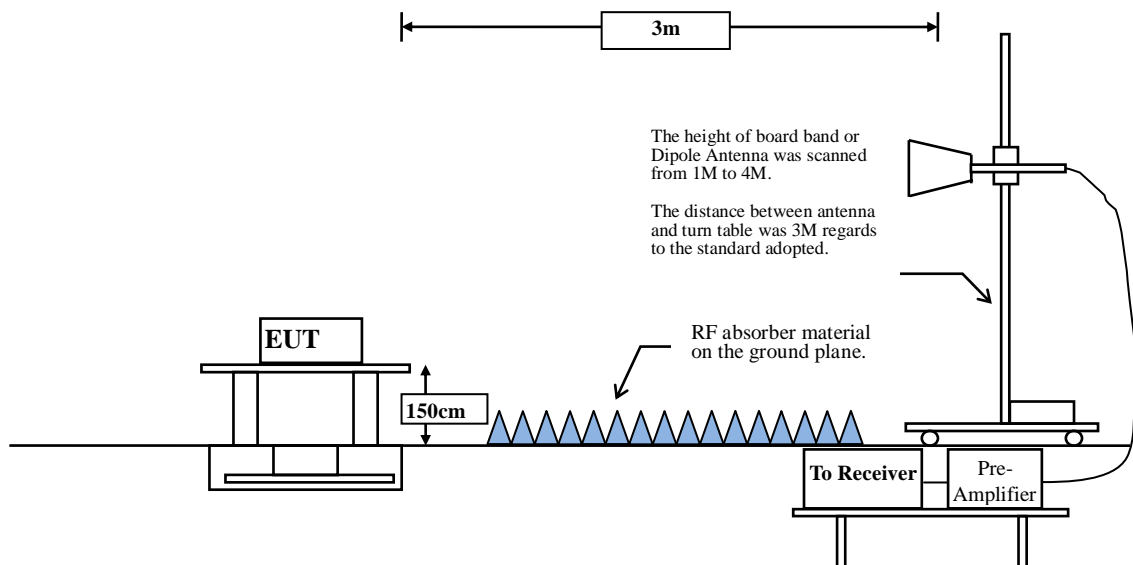
### 4.1. Test Setup

#### RF Conducted Measurement



#### RF Radiated Measurement:

Above 1GHz



#### 4.2. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. 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.

The average measurement tested according to KDB 558074 section 12.2.5.3. Reduced VBW averaging across on- and off-times of the EUT transmissions with max hold.

$VBW \geq 1/T$ :

| T      | 1/T | VBW Setting |
|--------|-----|-------------|
| 1.0652 | 939 | 1000        |

#### 4.4. Uncertainty

± 4.08 dB above 1GHz

± 4.22 dB below 1GHz

#### 4.5. Test Result of Band Edge

Product : Intel® Wireless-AC 9560  
 Test Item : Band Edge  
 Test Site : No.8 CB  
 Test date : 2018/11/20  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2402MHz)

##### RF Radiated Measurement (Horizontal):

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 00 (Peak)    | 2390.000        | 6.474               | 39.583               | 46.058                  | 74.00               | 54.00                  | Pass   |
| 00 (Peak)    | 2400.000        | 6.528               | 63.240               | 69.768                  | --                  | --                     | --     |
| 00 (Peak)    | 2401.449        | 6.537               | 83.977               | 90.514                  | --                  | --                     | --     |
| 00 (Average) | 2390.000        | 6.474               | 23.082               | 29.557                  | 74.00               | 54.00                  | Pass   |
| 00 (Average) | 2400.000        | 6.528               | 53.922               | 60.450                  | --                  | --                     | --     |
| 00 (Average) | 2402.029        | 6.540               | 82.776               | 89.316                  | --                  | --                     | --     |

Figure Channel 00: Horizontal (Peak)

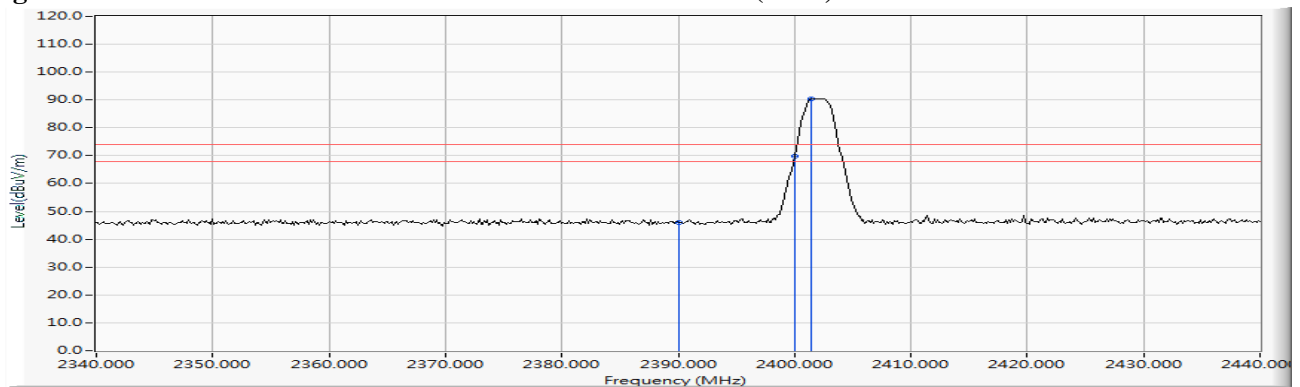
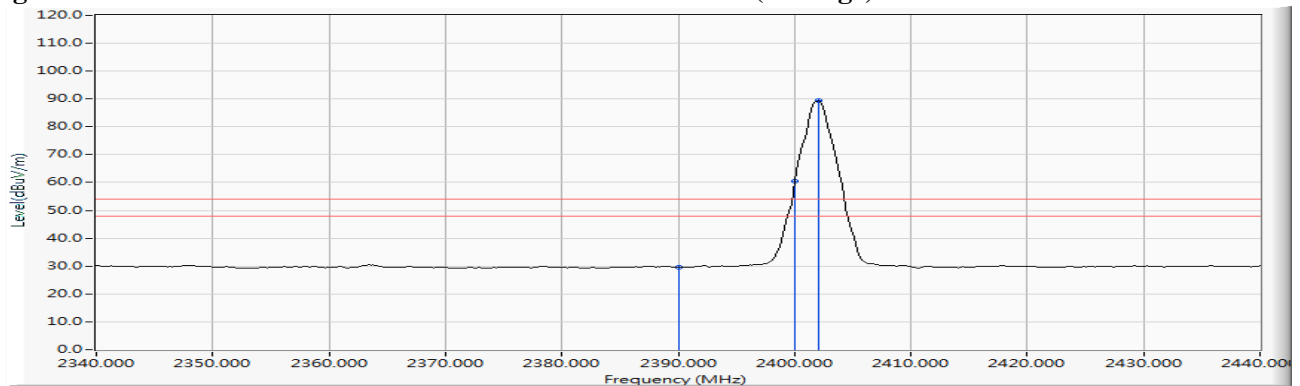


Figure Channel 00: Horizontal (Average)



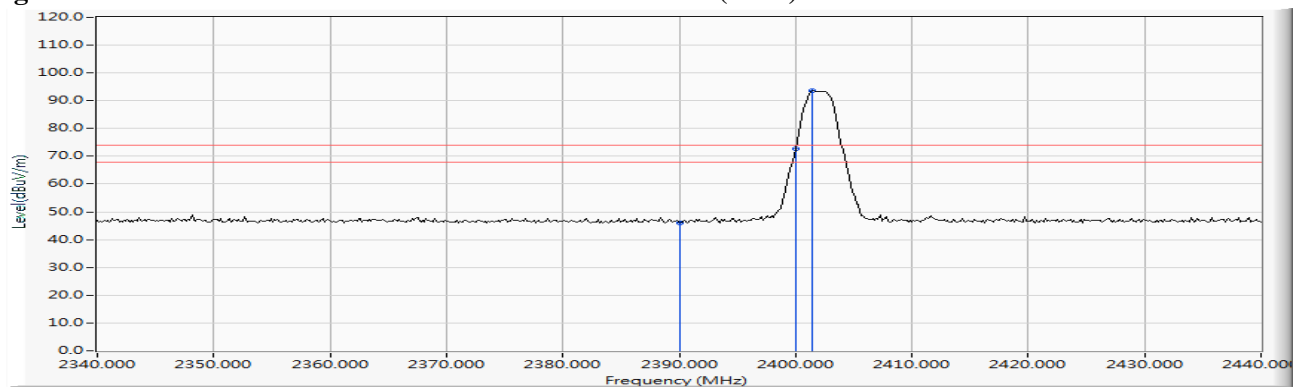
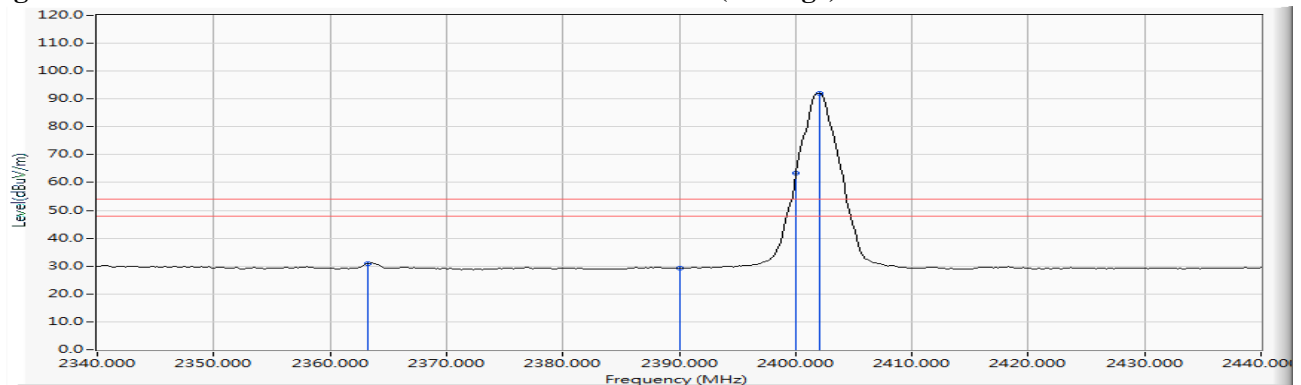
Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Wireless-AC 9560  
 Test Item : Band Edge  
 Test Site : No.8 CB  
 Test date : 2018/11/20  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2402MHz)

**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 00 (Peak)    | 2390.000        | 5.880               | 40.051               | 45.932                  | 74.00               | 54.00                  | Pass   |
| 00 (Peak)    | 2400.000        | 5.879               | 66.919               | 72.798                  | --                  | --                     | --     |
| 00 (Peak)    | 2401.449        | 5.883               | 87.629               | 93.512                  | --                  | --                     | --     |
| 00 (Average) | 2363.188        | 5.991               | 24.922               | 30.913                  | 74.00               | 54.00                  | Pass   |
| 00 (Average) | 2390.000        | 5.880               | 23.379               | 29.260                  | 74.00               | 54.00                  | Pass   |
| 00 (Average) | 2400.000        | 5.879               | 57.344               | 63.223                  | --                  | --                     | --     |
| 00 (Average) | 2402.029        | 5.884               | 86.227               | 92.111                  | --                  | --                     | --     |

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

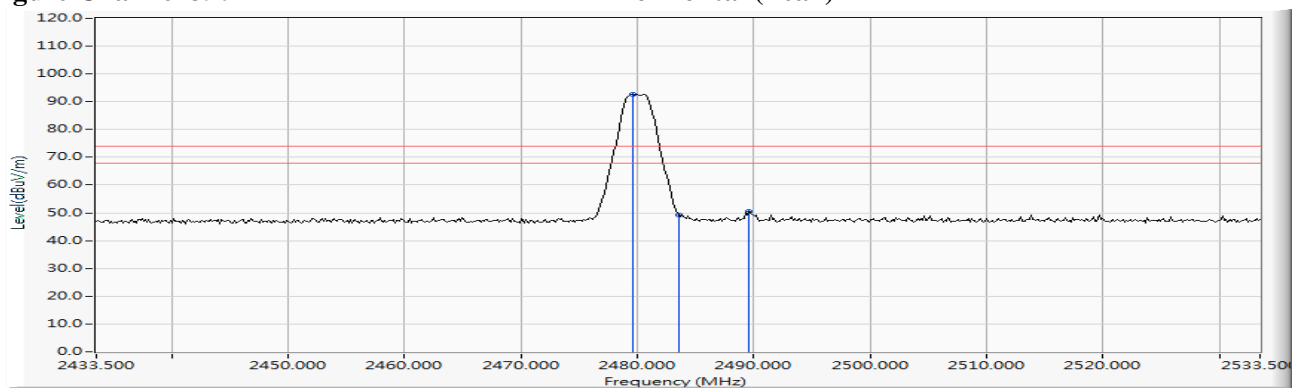
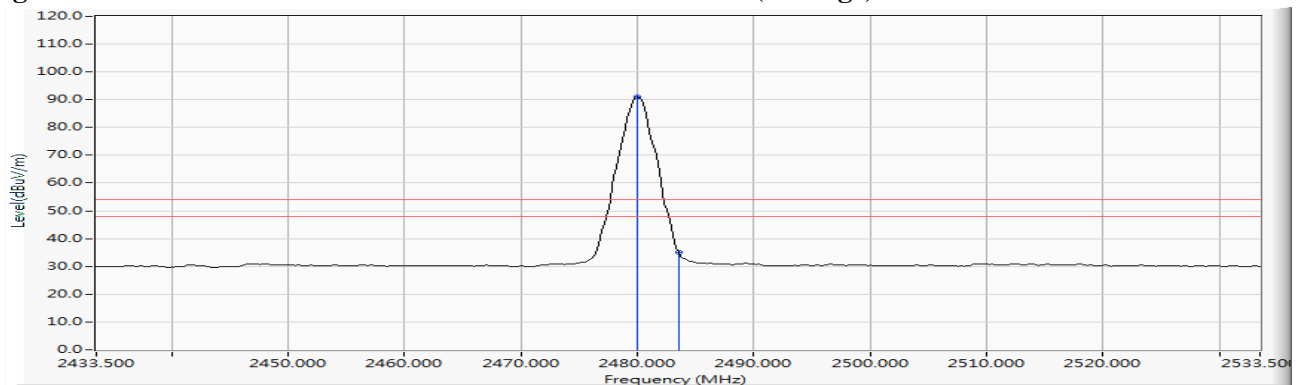
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.



Product : Intel® Wireless-AC 9560  
 Test Item : Band Edge  
 Test Site : No.8 CB  
 Test date : 2018/11/20  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2480MHz)

**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 39 (Peak)    | 2479.587        | 7.082               | 85.463               | 92.545                  | --                  | --                     | --     |
| 39 (Peak)    | 2483.500        | 7.110               | 42.040               | 49.150                  | 74.00               | 54.00                  | Pass   |
| 39 (Peak)    | 2489.587        | 7.154               | 43.448               | 50.601                  | 74.00               | 54.00                  | Pass   |
| 39 (Average) | 2480.022        | 7.086               | 83.868               | 90.953                  | --                  | --                     | --     |
| 39 (Average) | 2483.500        | 7.110               | 27.800               | 34.910                  | 74.00               | 54.00                  | Pass   |

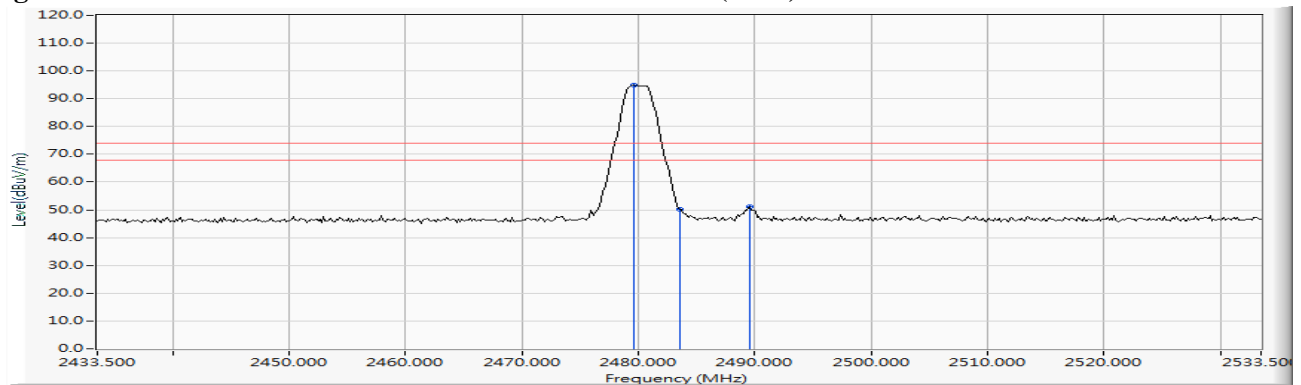
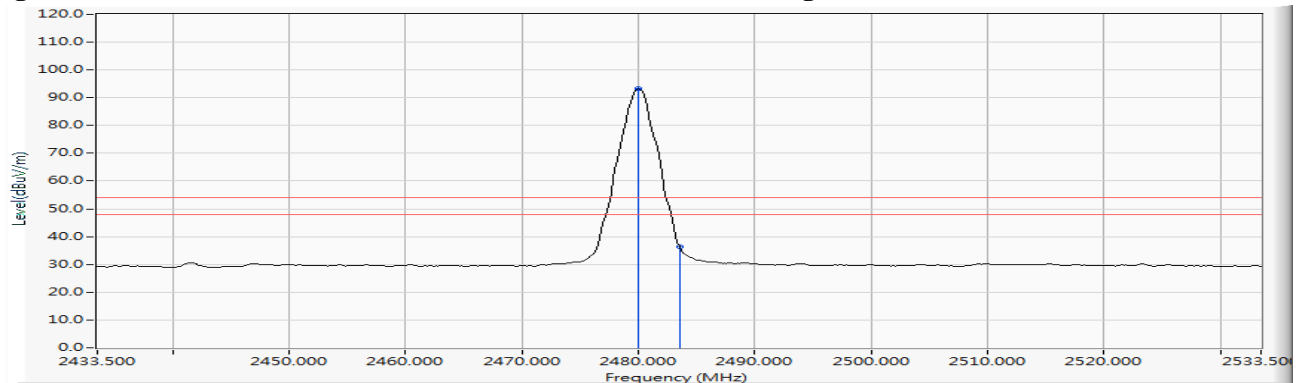
**Figure Channel 39: Horizontal (Peak)****Figure Channel 39: Horizontal (Average)****Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Wireless-AC 9560  
 Test Item : Band Edge  
 Test Site : No.8 CB  
 Test date : 2018/11/20  
 Test Mode : Mode 1: Transmit - BLE (GFSK) (2480MHz)

**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 39 (Peak)    | 2479.587        | 6.338               | 88.423               | 94.762                  | --                  | --                     | --     |
| 39 (Peak)    | 2483.500        | 6.363               | 43.778               | 50.141                  | 74.00               | 54.00                  | Pass   |
| 39 (Peak)    | 2489.587        | 6.402               | 44.662               | 51.063                  | 74.00               | 54.00                  | Pass   |
| 39 (Average) | 2480.022        | 6.342               | 86.816               | 93.158                  | --                  | --                     | --     |
| 39 (Average) | 2483.500        | 6.363               | 30.146               | 36.509                  | 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. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

## **5. EMI Reduction Method During Compliance Testing**

No modification was made during testing.