# RF Exposure Evaluation Report

Product Name : Intel® Wireless-AC 9260D2WL

Model No. : 9260D2WL

FCC ID : PD99260D2L

Applicant : Intel Corporation

Address : 100 Center Point Circle Suite 200 Columbia,
South Carolina 29210, United States

| | | |
|---|---|---|
| Date of Receipt | : | Mar. 30, 2019 |
| Date of Declaration | : | July 01, 2019 |
| Report No. | : | 1930503R-SAUSP03V00 |
| Report Version | : | V1.0 |

Issued Date: July 01, 2019
Report No.: 1930503R-SAUSP03V00

| | |
|---|---|
| Product Name | Intel® Wireless-AC 9260D2WL |
| Applicant | Intel Corporation |
| Address | 100 Center Point Circle Suite 200 Columbia, South Carolina 29210,<br>United States |
| Manufacturer | INTEL MOBILE COMMUNICATIONS |
| Model No. | 9260D2WL |
| FCC ID. | PD99260D2L |
| Trade Name | Intel |
| Applicable Standard | FCC 47 CFR 1.1307 |
| Test Result | Complied |

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

Tested By : wen Lee
( Supervisor / Wen Lee )

Approved By :
( Director / Vincent Lin )

# 1. GENERAL INFORMATION

## 1.1. EUT Description

| | |
|---|---|
| Product Name | Intel® Wireless-AC 9260D2WL |
| Trade Name | Intel |
| Model No. | 9260D2WL |
| FCC ID. | PD99260D2L |
| Frequency Range | 802.11b/g/n-20MHz:2412MHz~2472MHz<br>802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz, 5720 MHz, 5745-5825MHz<br>802.11n-40MHz: 5190-5310MHz, 5510-5670MHz, 5710 MHz, 5755-5795MHz<br>802.11ac-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz<br>802.11ac-160MHz: 5250MHz, 5570MHz<br>BT : 2402-2480MHz |
| Channel Number | 802.11b/g/n-20MHz: 13, n-40MHz: 9<br>802.11a/n-20MHz: 25; 802.11n-40MHz: 12<br>802.11ac-80MHz: 6, 802.11ac-160MHz: 2<br>BT : 79 , BLE : 40 |
| Type of Modulation | DSSS/OFDM/BPSK/QPSK/16QAM/64QAM/256QAM/1024-QAM<br>FHSS: GFSK(1Mbps) / $\pi$ /4DQPSK(2Mbps) / 8DPSK(3Mbps) |
| 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.,Itd. | GY121HT0321-003-H / GY121C888-001-H | Dipole Antenna | 2.89dBi for 2.4 GHz<br>2.92 dBi for 5.15~5.25GHz<br>3.19 dBi for 5.25~5.35GHz<br>4.41 dBi for 5.47~5.725GHz<br>4.22 dBi for 5.725~5.85GHz |

## 2. RF Exposure Evaluation

### 2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density ($mW/cm^2$) | Average Time (Minutes) |
|---|---|---|---|---|
| (A) Limits for Occupational/ Control Exposures | | | | |
| 300-1500 | -- | -- | F/300 | 6 |
| 1500-100,000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/ Uncontrolled Exposures | | | | |
| 300-1500 | -- | -- | F/1500 | 6 |
| 1500-100,000 | -- | -- | 1 | 30 |

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in $mW/cm^2$

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

## 2.2. Test Result of RF Exposure Evaluation

Product : Intel® Wireless-AC 9260D2WL
Test Item : RF Exposure Evaluation

**WLAN 2.4G Peak Gain: 2.89dBi**

| Band | Frequency (MHz) | Conducted maximum Peak Power (dBm) | Worst case Duty Cycle (%) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm2) | Limit (mW/cm2) | Pass/Fail |
|---|---|---|---|---|---|---|---|
| 2.4G | 2442 | 29.68 | 84.04 | 1105.386 | 0.4278 | 1 | Pass |

**WLAN 5G Peak Gain: 4.41dBi**

| Band | Frequency (MHz) | Conducted maximum Average Power (dBm) | Worst case Duty Cycle (%) | Output Power to Antenna (mW) | Power Density at R = 20 cm ($mW/cm^2$) | Limit ($mW/cm^2$) | Pass/Fail |
|---|---|---|---|---|---|---|---|
| 5G | 5825 | 23.17 | 69.87 | 296.968 | 0.1631 | 1 | Pass |

Note: The Maximum conducted output power is refer to report No.: 1930503R-RFUSP25V00, 1930503R-RFUSP30V00, 1930503R-RFUSP23V00, 1930503R-RFUSP23V00-A from the DEKRA.