

## RF Exposure Evaluation declaration

Product Name	Intel® Wireless-AC 9462
Model No.	9462D2W
FCC ID	PD99462D2

Applicant	Intel Mobile Communications
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA

Date of Receipt	Feb. 22, 2018
Date of Declaration	Apr. 09, 2018
Report No.	1820197R-RFUSP02V00

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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Applicant	Intel Mobile Communications
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA
Manufacturer	Intel Mobile Communications
Model No.	9462D2W
FCC ID.	PD99462D2
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)
EUT Test Voltage	DC 3.3V (via Mini-PCI Express slot)
Trade Name	Intel
Applicable Standard	FCC 47 CFR 1.1310
Test Result	Complied

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

Tested By : Yun Che Chen  
 ( Engineer / Yunche Chen )

Approved By : Vincent Lin  
 ( Director / Vincent Lin )

## 1. RF Exposure Evaluation

### 1.1. 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 <sup>2</sup> )	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:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

### 1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

### 1.3. Test Result of RF Exposure Evaluation

Product : Intel® Wireless-AC 9462  
 Test Item : RF Exposure Evaluation  
 Test Site : No.3 OATS

#### For 2.4GHz:

Operation Frequency Range	2412-2472MHz, 2422-2462MHz, 2402-2480MHz
Maximum Conducted output power	22.94dBm
Antenna gain	2.89dBi

#### Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
196.788629	0.0762

Power density is lower than the limit (1 mW/cm<sup>2</sup>).

#### For 5GHz:

Operation Frequency Range	5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745-5825MHz, 5190-5230MHz, 5270-5310MHz, 5510-5670MHz, 5755-5795MHz, 5720 MHz, 5710MHz, 5210-5290MHz, 5530-5690MHz, 5775MHz
Maximum Conducted output power	21.36dBm
Antenna gain	4.41dBi

#### Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
136.7728826	0.0751

Power density is lower than the limit (1 mW/cm<sup>2</sup>).

(5) EUT Photo



(6) EUT Photo

