RF Exposure Evaluation declaration

Product Name : Intel® Dual Band Wireless-AC 8265

Model No. : 8265NGW

FCC ID : PD98265NG, PD98265NGU

Applicant : Intel Mobile Communications

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

Date of Receipt : Sep. 07, 2016

Date of Declaration : Oct. 13, 2016

Report No. : 1690161R-RFUSP02V00

Issued Date: Oct. 13, 2016
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Product Name	Intel® Dual Band Wireless-AC 8265
Applicant	Intel Mobile Communications
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA
Manufacturer	Intel Mobile Communications
Model No.	8265NGW
FCC ID.	PD98265NG, PD98265NGU
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)
EUT Test Voltage	AC 120V/60Hz
Trade Name	Intel
Applicable Standard	FCC 47 CFR 1.1310
Test Result	Complied

Documented By : Genie Chang

(Senior Adm. Specialist / Genie Chang)

Tested By : Nick Chen

(Engineer / Nick Chen)

Approved By :

(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^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

Pd id the limit of MPE, 1 mW/cm^2. 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℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product : Intel® Dual Band Wireless-AC 8265
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	29.96dBm
Antenna gain	2.89dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
990.8319	0.3835

Power density is lower than the limit (1 mW/cm2).

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	23.32dBm
Antenna gain	4.41dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
214.7830	0.1180

Power density is lower than the limit (1 mW/cm2).