RF Exposure Evaluation declaration

Product Name : 802.11 b/g/n PCIe Module

Model No. : NGP1024

FCC ID : HZB-NGP1024

Applicant : Proxim Wireless Corporation

Address : 47633 Westinghouse Drive, Fremont City, California, United States 94539

Date of Receipt : Mar. 16, 2015

Date of Declaration : Apr. 17, 2015

Report No. : 1570041R-RFUSP25V00

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 : 802.11 b/g/n PCIe Module
Test Item : RF Exposure Evaluation
Test Site : No.3 OATS

Omni Antenna:

Operation Frequency	2412-2462MHz
Maximum Conducted output power	25.87dBm
Antenna Gain	10dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = **20** cm (mW/cm2)
386.3669771	0.7687

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

Panel Antenna:

Operation Frequency	2412-2462MHz
Maximum Conducted output power	19.17dBm
Antenna Gain	20dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = **26** cm (mW/cm2)
82.60379496	0.9724

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