

## RF Exposure Report

**Report No.:** SA150415D03A

**FCC ID:** PY315200306

**Test Model:** D7000

**Received Date:** Jul. 7, 2015

**Test Date:** Jul. 8 ~ Oct. 12, 2015

**Issued Date:** Oct. 13, 2015

**Applicant:** NETGEAR INC.

**Address:** 350 East Plumeria Drive, San Jose, CA 95134, USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)



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### Release Control Record

| Issue No.    | Description       | Date Issued   |
|--------------|-------------------|---------------|
| SA150415D03A | Original release. | Oct. 13, 2015 |

## 1 Certificate of Conformity

**Product:** AC1900 WiFi VDSL/ADSL Modem Router

**Brand:** NETGEAR

**Test Model:** D7000

**Sample Status:** Engineering sample

**Applicant:** NETGEAR INC.

**Test Date:** Jul. 8 ~ Oct. 12, 2015

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :** Celia Chen , **Date:** Oct. 13, 2015  
( Celia Chen / Senior Specialist )

**Approved by :** Rex Lai , **Date:** Oct. 13, 2015  
( Rex Lai / Assistant Manager )

## 2 RF Exposure

### 2.1 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) |
|-------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| Limits For General Population / Uncontrolled Exposure |                               |                               |                                     |                        |
| 300-1500                                              | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000                                          | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

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

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 25cm away from the body of the user.

So, this device is classified as **Mobile Device**.

### 3 Calculation Result Of Maximum Conducted Power

| Frequency Band (MHz) | Max Power (dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412-2462            | 29.53           | 5.77               | 25            | 0.4314                              | 1                           |
| 5745-5825            | 28.88           | 7.07               | 25            | 0.5011                              | 1                           |

**NOTE:**

2.4GHz: Directional gain = 1dBi + 10log(3) = 5.77dBi

5.0GHz: Directional gain = 2.3dBi + 10log(3) = 7.07dBi

**Conclusion:**

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + .....etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.4314 + 0.5011 = 0.9325

**Therefore the maximum calculation of this situation is 0.9325, which is less than the "1" limit.**

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