

## RF Exposure Report

**Report No.:** SA161202E10

**FCC ID:** PY316400356

**Test Model:** D7000v2

**Received Date:** Dec. 02, 2016

**Test Date:** Mar. 27, 2017

**Issued Date:** Apr. 11, 2017

**Applicant:** NETGEAR, Inc.

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

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

Issue No.	Description	Date Issued
SA161202E10	Original release.	Apr. 11, 2017

## 1 Certificate of Conformity

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

**Brand:** NETGEAR

**Test Model:** D7000v2

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** NETGEAR, Inc.

**Test Date:** Mar. 27, 2017

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

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 :** Wendy Wu , **Date:** Apr. 11, 2017  
Wendy Wu / Specialist

**Approved by :** May Chen , **Date:** Apr. 11, 2017  
May Chen / 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				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz ; \*Plane-wave equivalent power density

### 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**.

### 2.4 Antenna Gain

Antenna No.	Ant. Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type	Cable Loss(dB)	Cable Length (mm)
1	0.82	2.4~2.4835	Dipole	Re-SMA	0.37	79
	2.76	5.15~5.85			0.57	
2	0.82	2.4~2.4835	Dipole	Re-SMA	0.37	88
	2.76	5.15~5.85			0.62	
3	0.82	2.4~2.4835	Dipole	Re-SMA	0.575	170
	2.76	5.15~5.85			0.62	

## 2.5 Calculation Result of Maximum Conducted Power

Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	991.898	5.15	25	0.41341	1
5180-5240	804.199	6.93	25	0.50498	1
5745-5825	818.141	6.93	25	0.51373	1

**NOTE:**

2.4GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 5.15\text{dBi}$

5GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 6.93\text{dBi}$

**Conclusion:**

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots\text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$WLAN\ 2.4GHz + WLAN\ 5GHz = 0.41341 / 1 + 0.51373 / 1 = 0.92714$

**Therefore the maximum calculations of above situations are less than the "1" limit.**

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