

## RF Exposure Report

**Report No.:** SA150624E07D

**FCC ID:** PY315300321

**Test Model:** WAC730

**Received Date:** Oct. 12, 2015

**Test Date:** Oct. 21, 2015

**Issued Date:** June 07, 2016

**Applicant:** NETGEAR, Inc.

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

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

**Lab Address:** No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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**Test Location (2):** No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

**Test Location (3):** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

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### Release Control Record

Issue No.	Description	Date Issued
SA150624E07D	Original release.	June 07, 2016

## 1 Certificate of Conformity

**Product:** ProSAFE Dual Band Wireless AC Access Point

**Brand:** NETGEAR

**Test Model:** WAC730

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** NETGEAR, Inc.

**Test Date:** Oct. 21, 2015

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

KDB 447498 D03

447498 D01 GENERAL RF EXPOSURE GUIDANCE V06

IEEE STD C95.1-2005

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:** June 07, 2016  
Wendy Wu / Specialist

**Approved by :** May Chen, **Date:** June 07, 2016  
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				
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**.

## 2.4 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

External Antenna									
PCB Chain No.	Brand	Model	Antenna Gain (dBi) (Excelude cable loss)	Cable Loss (dB)	Net Gain (dBi)	Cable Length (mm)	Frequency range (GHz to GHz)	Antenna Type	Connector Type
Chain (0) (Left)	Master Wave Tech.	98364PRSX004	0.8	0.8	0	180	2.4~2.4835	Dipole	R-SMA
			1.5	1.5	0		5.15~5.25		
			1.6	1.5	0.1		5.25~5.35		
			0.7	1.5	-0.8		5.47~5.725		
			0.5	1.5	-1		5.725~5.85		
Chain (1) (Mid)	Master Wave Tech.	98364PRSX004	0.8	0.5	0.3	60	2.4~2.4835	Dipole	R-SMA
			1.5	0.9	0.6		5.15~5.25		
			1.6	0.9	0.7		5.25~5.35		
			0.7	0.9	-0.2		5.47~5.725		
			0.5	0.9	-0.4		5.725~5.85		
Chain (2) (Right)	Master Wave Tech.	98364PRSX004	0.8	0.9	-0.1	190	2.4~2.4835	Dipole	R-SMA
			1.4	1.7	-0.3		5.15~5.25		
			1.6	1.7	-0.1		5.25~5.35		
			0.7	1.7	-1		5.47~5.725		
			0.7	1.7	-1		5.725~5.85		
Internal Antenna									
PCB Chain No.	Brand	Model	Antenna Gain (dBi)		Frequency range (GHz to GHz)		Antenna Type	Connector Type	
Chain (0)	NA	NA	5		2.4~2.4835		PIFA	i-pex(MHF)	
			6		5.15~5.25				
			6		5.25~5.35				
			6		5.47~5.725				
			6		5.725~5.85				
Chain (1)	NA	NA	5		2.4~2.4835		PIFA	i-pex(MHF)	
			6		5.15~5.25				
			6		5.25~5.35				
			6		5.47~5.725				
			6		5.725~5.85				
Chain (2)	NA	NA	5		2.4~2.4835		PIFA	i-pex(MHF)	
			6		5.15~5.25				
			6		5.25~5.35				
			6		5.47~5.725				
			6		5.725~5.85				

## 2.5 Calculation Result Of Maximum Conducted Power

**For 2.4GHz & 5GHz (U-NII-1 band & U-NII-3 band) data was copied from the original test report. (Report No.: SA150624E07F)**

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	484.435	9.77	25	0.58498	1
5180-5240	92.996	10.77	25	0.14138	1
5260-5320	159.563	10.77	25	0.24257	1
5500--5700	199.429	10.77	25	0.30318	1
5745-5825	241.15	10.77	25	0.36660	1

NOTE:

2.4GHz: Directional gain = 5dBi + 10log(3) = 9.77dBi

5GHz: Directional gain = 6dBi + 10log(3) = 10.77dBi

### 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 = 0.58498 / 1 + 0.36660 / 1 = 0.95158

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

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