RF Exposure Report

Report No.:	SA181023C12A
FCC ID:	PY318300422
Test Model:	EX7300v2
Series Model:	EX6400v2
Received Date:	Oct. 23, 2018
Test Date:	Nov. 05 ~ Dec. 26, 2018
Issued Date:	Jan. 07, 2019
Applicant:	NETGEAR, INC.
Address:	350 East Plumeria Drive San Jose, CA 95134
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.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA181023C12A	Original release	Jan. 07, 2019

1 Certificate of Conformity

Product:	Nighthawk X4 AC2200 WiFi Mesh Extender, AC1900 WiFi Mesh Extender
Brand:	NETGEAR
Test Model:	EX7300v2
Series Model:	EX6400v2
Sample Status:	Engineering sample
Applicant:	NETGEAR, INC.
Test Date:	Nov. 05 ~ Dec. 26, 2018
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 RF characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Jan. 07, 2019
Polly Chien / Specialist

Approved by : _____ , **Date:** Jan. 07, 2019
Bruce Chen / Project Engineer

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^2)	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^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

2.3 Classification

The antenna of this product, under normal use condition, is at least 21cm 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^2)	Limit (mW/cm^2)
Model: EX7300v2					
CDD Mode					
2412-2462	26.19	7.60	21	0.432	1
5180-5240	29.32	5.49	21	0.546	1
5260-5320	23.64	5.48	21	0.147	1
5500-5720	23.34	5.11	21	0.126	1
5745-5825	29.35	5.14	21	0.507	1
Beamforming Mode					
5180-5240	29.05	5.49	21	0.513	1
5180-5240	23.64	5.48	21	0.147	1
5260-5320	23.34	5.11	21	0.126	1
5745-5825	29.29	5.14	21	0.500	1
Model: EX6400v2					
CDD Mode:					
2412-2462	24.88	6.07	21	0.225	1

Note:

Model: EX7300v2

2412 ~ 2462MHz: 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$]= 7.60dBi

5180 ~ 5240MHz: Directional gain = 5.49dBi

5260 ~ 5320MHz: Directional gain = 5.48dBi

5500 ~ 5700MHz: Directional gain = 5.11dBi

5745 ~ 5825MHz: Directional gain = 5.14dBi

Model: EX6400v2

2412 ~ 2462MHz: 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/3$]= 6.07dBi

Conclusion:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

2.4G + 5G = 0.432 / 1 + 0.546 / 1 = 0.978

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

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