RF Exposure Report

Report No.:	SA180521E10F
FCC ID:	PY318200414
Test Model:	RAX80
Received Date:	Mar. 14, 2019
Test Date:	July 16 to 17, 2018; Apr. 01, 2019
Issued Date:	Sep. 18, 2020
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:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA180521E10F	Original release.	Sep. 18, 2020

1 Certificate of Conformity

Product:	Nighthawk AX8 8-Stream AX6000 WiFi Router
Brand:	NETGEAR
Test Model:	RAX80
Sample Status:	ENGINEERING SAMPLE
Applicant:	NETGEAR, Inc.
Test Date:	July 16 to 17, 2018; Apr. 01, 2019
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 : Phoenix Huang , **Date:** Sep. 18, 2020

Phoenix Huang / Specialist

Approved by : , **Date:** Sep. 18, 2020

Clark Lin / Technical 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^2)	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	($180/f^2$)*	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^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 24cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.4835	4.28	Dipole	i-pex(MHF)
5.15~5.25	5.56		
5.25~5.35	5.56		
5.47~5.725	6.22		
5.725~5.85	6.22		
Note: More detailed information, please refer to opearating description.			

Note: The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.5 Calculation Result of Maximum Conducted Power

For 2.4GHz and 5GHz (except for straddle channels) data was copied from the original test report (Report No.: SA180521E10)

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN 2.4GHz	2437	998.128	4.28	24	0.36945	1
WLAN (U-NII-1)	5200	988.161	5.56	24	0.49113	1
WLAN (U-NII-2A)	5320	248.698	5.56	24	0.12361	1
WLAN (U-NII-2C)	5500	238.154	6.22	24	0.13779	1
WLAN (U-NII-3)	5755	946.94	6.22	24	0.54788	1
WLAN (Straddle channel)	5690	147.122	6.22	24	0.08512	1

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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 = 0.36945 / 1 + 0.54788 / 1 = 0.91733

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

--- END ---