

RF Exposure Report

Report No.: SA200609C14

FCC ID: PY320100484

Test Model: SXR80

Series Model: SXS80

Received Date: Jun. 09, 2020

Test Date: Jul. 01 ~ Jul. 05, 2020

Issued Date: Jul. 16, 2020

Applicant: NETGEAR, INC.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SA200609C14	Original release	Jul. 16, 2020

1 Certificate of Conformity

Product: Orbi Pro WiFi 6 Router / Orbi Pro WiFi 6 Satellite

Brand: NETGEAR

Test Model: SXR80

Series Model: SXS80

Sample Status: Engineering sample

Applicant: NETGEAR, INC.

Test Date: Jul. 01 ~ Jul. 05, 2020

Standards: FCC Part 2 (Section 2.1091)

References Test KDB 447498 D01 General RF Exposure Guidance v06

Guidance: IEEE C95.3 -2002

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.

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Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Jul. 16, 2020
Bruce Chen / Senior 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				
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/cm²

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 36cm 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 Average Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
CDD Mode					
2412-2462	29.79	6.81	36	0.281	1
5180-5240	29.56	7.56	36	0.316	1
5745-5825	29.90	7.88	36	0.368	1
Beamforming Mode					
2412-2462	29.17	6.81	36	0.243	1
5180-5240	28.41	7.56	36	0.243	1
5745-5825	28.10	7.88	36	0.243	1

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

Note: The above Max Power is Tune-up Power which client declared.

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

2412-2462 MHz + 5180-5240 MHz + 5745-5825 MHz
 $= 0.281 / 1 + 0.316 / 1 + 0.368 / 1 = 0.965 < 1$

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

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