RF Exposure Report

Report No.:	SABBQZ-WTW-P21031069A
FCC ID:	PY321100530
Test Model:	RBR760 and RBS760
Received Date:	Aug. 13, 2021
Test Date:	Aug. 24 ~ Oct. 15, 2021
Issued Date:	Jan. 17, 2022
Applicant and Manufacturer:	NETGEAR, INC.
Address:	350 East Plumeria Drive, San Jose, CA 95134, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
SABBQZ-WTW-P21031069A	Original release	Jan. 17, 2022

1 Certificate of Conformity

Product:	Orbi Router / Orbi Satellite
Brand:	NETGEAR
Test Model:	RBR760 and RBS760
Sample Status:	Engineering sample
Applicant:	NETGEAR, INC.
Test Date:	Aug. 24 ~ Oct. 15, 2021
Standards:	FCC Part 2 (Section 2.1091)
References Test Guidance:	KDB 447498 D01 General RF Exposure Guidance v06

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 : Pettie Chen , **Date:** Jan. 17, 2022

Pettie Chen / Senior Specialist

Approved by : Jeremy Lin , **Date:** Jan. 17, 2022

Jeremy Lin / Senior 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/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 30cm 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 AV Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
CDD Mode					
2412-2462	29.61	3.80	30	0.194	1
5180-5240	29.12	2.98	30	0.143	1
5260-5320	23.56	2.85	30	0.039	1
5500-5720	23.27	3.41	30	0.041	1
5745-5825	29.28	3.48	30	0.167	1
Beamforming Mode					
2412-2462	29.24	6.67	30	0.345	1
5180-5240	29.11	5.82	30	0.275	1
5260-5320	23.56	5.76	30	0.076	1
5500-5720	23.27	6.41	30	0.082	1
5745-5825	29.28	6.44	30	0.330	1

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
CDD Mode				
5845-5885	31.23	30	0.117	1
Beamforming Mode				
5845-5885	33.37	30	0.192	1

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 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.

2412-2462MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.67dBi.
5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.82dBi.
5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.76dBi
5500-5720MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.41dBi
5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.44dBi.

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

2.4G + 5180-5320MHz + 5500-5825MHz = 0.345 / 1 + 0.275 / 1 + 0.330 / 1 = 0.950
2.4G + 5180-5320MHz + 5845-5885MHz = 0.345 / 1 + 0.275 / 1 + 0.192 / 1 = 0.812

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

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