RF Exposure Report

Report No.:	SA180104E04
FCC ID:	PY317300396
Test Model:	CBR40
Received Date:	Jan. 04, 2018
Test Date:	Jan. 18, 2018
Issued Date:	Feb. 01, 2018
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.
FCC Registration / Designation Number:	723255 / TW2022

Testing Laboratory
2022

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA180104E04	Original release.	Feb. 01, 2018

1 Certificate of Conformity

Product:	Orbi Cable Router
Brand:	NETGEAR
Test Model:	CBR40
Sample Status:	ENGINEERING SAMPLE
Applicant:	NETGEAR, Inc.
Test Date:	Jan. 18, 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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Feb. 01, 2018
Phoenix Huang / Specialist

Approved by : _____ , **Date:** Feb. 01, 2018
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^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 32cm 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)
2.4~2.4835	6.02
5.15~5.25	6.07
5.725~5.85	6.23

2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	985.324	6.02	32	0.30624	1
5180-5240	871.19	6.07	32	0.27391	1
5745-5825	906.078	6.23	32	0.29557	1

NOTE:
2.4GHz: Directional gain = 6.02dBi
5GHz:
UNII-1: Directional gain = 6.07dBi
UNII-3: Directional gain = 6.23dBi

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 (UNII-1) + WLAN 5GHz (UNII-3) = 0.30624 / 1 + 0.27391 / 1 + 0.29557 / 1 = 0.87572

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

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