

## RF Exposure Report

**Report No.:** SA191129E09

**FCC ID:** PY319400470

**Test Model:** RBR750

**Series Model:** RBS750

**Received Date:** Nov. 29, 2019

**Test Date:** Jan. 08 ~ Jan. 13, 2020

**Issued Date:** Jan. 14, 2020

**Applicant:** 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 /** 788550 / TW0003  
**Designation Number:**



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### Release Control Record

Issue No.	Description	Date Issued
SA191129E09	Original release	Jan. 14, 2020

## 1 Certificate of Conformity

**Product:** Orbi Router, Orbi Satellite

**Brand:** NETGEAR

**Test Model:** RBR750

**Series Model:** RBS750

**Sample Status:** Engineering sample

**Applicant:** NETGEAR, INC.

**Test Date:** Jan. 08 ~ Jan. 13, 2020

**Standards:** FCC Part 2 (Section 2.1091)  
IEEE C95.1-1992

**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. 14, 2020  
Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Jan. 14, 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 <sup>2</sup> )	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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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 Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
CDD Mode					
2412-2462	29.82	5.46	30	0.298	1
5180-5240	28.41	5.67	30	0.226	1
5745-5825	29.93	6.94	30	0.430	1
Beamforming Mode					
2412-2462	28.11	5.46	30	0.201	1
5180-5240	28.41	5.67	30	0.226	1
5745-5825	29.04	6.94	30	0.350	1

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

1. 2.4GHz: Directional gain = 5.46dBi
2. 5GHz U-NII-1: Directional gain = 5.67dBi
2. 5GHz U-NII-3: Directional gain = 6.94dBi

#### 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

$WLAN\ 2.4GHz + WLAN\ 5.0GHz = 0.298 / 1 + 0.226 / 1 + 0.430 / 1 = 0.954$

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

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