# RF Exposure Report

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| **Report No.:** | SA150326C26E |
| **FCC ID:** | TE7C3200 |
| **Test Model:** | Archer C3200 |
| **Received Date:** | May 10, 2016 |
| **Test Date:** | May 29 ~ Jun. 07, 2016 |
| **Issued Date:** | Jun. 14, 2016 |
| **Applicant:** | TP-LINK TECHNOLOGIES CO., LTD. |
| **Address:** | Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch |
| **Lab Address:** | No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C. |
| **Test Location:** | No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.) |

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## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| SA150326C26E | Original release | Jun. 14, 2016 |

## 1 Certificate of Conformity

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|---|---|
| **Product:** | AC3200 Wireless Tri-Band Gigabit Router |
| **Brand:** | TP-LINK |
| **Test Model:** | Archer C3200 |
| **Sample Status:** | Prototype |
| **Applicant:** | TP-LINK TECHNOLOGIES CO., LTD. |
| **Test Date:** | May 29 ~ Jun. 07, 2016 |
| **Standards:** | FCC Part 2 (Section 2.1091)<br>KDB 447498 D01 (October 23, 2015)<br>IEEE C95.1 |

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 :** Celine Chou , **Date:** Jun. 14, 2016

Celine Chou / Specialist

**Approved by :** Ken Liu , **Date:** Jun. 14, 2016

Ken Liu / Senior 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 | | | | |
| 300-1500 | … | … | F/1500 | 30 |
| 1500-100,000 | … | … | 1.0 | 30 |

F = Frequency in MHz

### 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 27cm 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 ($mW/cm^2$) | Limit ($mW/cm^2$) |
|---|---|---|---|---|---|
| 2412-2462 | 29.66 | 6.57 | 27 | 0.458 | 1 |
| Beamforming off | | | | | |
| 5180-5240 | 26.63 | 6.57 | 27 | 0.228 | 1 |
| 5745-5825 | 29.99 | 6.57 | 27 | 0.494 | 1 |
| Beamforming on | | | | | |
| 5180-5240 | 26.88 | 6.57 | 27 | 0.242 | 1 |
| 5745-5825 | 29.29 | 6.57 | 27 | 0.421 | 1 |

Note: Directional gain = 1.8dBi + 10log(3) = 6.57dBi

**CONCULSION:**

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G = 0.458 + 0.494 = 0.952

WLAN 5.0G (5180-5240MHz) + WLAN 5.0G (5745-5825MHz) = 0.242 + 0.494 = 0.736

Therefore, the maximum calculation of this situation is 0.952, which is less than the “1” limit.

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