

RF Exposure Report

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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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 RF Exposure	5
2.1 Limits for Maximum Permissible Exposure (MPE).....	5
2.2 MPE Calculation Formula	5
2.3 Classification	5
3 Calculation Result Of Maximum Conducted Power	6

Release Control Record

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

1 Certificate of Conformity

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)
KDB 447498 D01 (October 23, 2015)
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

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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

CONCLUSION:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, 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 2.4G + 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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