

RF Exposure Report

Report No.: SA150202C14

FCC ID: MSQ-RT1D00

Test Model: RT-AC1200

Series Model: RT-N600

Received Date: Feb. 02, 2015

Test Date: Apr. 13 ~ May 06, 2015

Issued Date: May 27, 2015

Applicant: ASUSTeK COMPUTER INC.

Address: 4F, NO. 150, Li-Te Rd. Peitou, Taipei Taiwan

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
SA150202C14	Original release.	May 27, 2015

1 Certificate of Conformity

Product: Wireless-AC1200 Dual Band USB Router

Brand: ASUS

Test Model: RT-AC1200

Series Model: RT-N600

Sample Status: Engineering sample

Applicant: ASUSTeK COMPUTER INC.

Test Date: Apr. 13 ~ May 06, 2015

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

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 :


Pettie Chen / Senior Specialist

Date: May 27, 2015

Approved by :


Ken Liu / Senior Manager

Date: May 27, 2015

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

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

where

Pd = power density in mW/cm²

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 20cm 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	23.79	8.01	20	0.301	1
5180-5240	25.03	8.01	20	0.401	1
5745-5825	25.12	8.01	20	0.409	1

Note: Directional gain = 5dBi + 10log(2) = 8.01dBi

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

$$\text{WLAN 2.4G} + \text{WLAN 5.0G} = 0.301 + 0.409 = 0.710$$

Therefore, the maximum calculation of this situation is 0.710, which is less than the "1" limit.

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