RF Exposure Report

Report No.:	SA150717C01
FCC ID:	MSQ-RT1E00
Test Model:	RT-AC1200G
Received Date:	Jul. 17, 2015
Test Date:	Oct. 06 ~ Nov. 06, 2015
Issued Date:	Nov. 09, 2015
Applicant:	ASUSTek COMPUTER INC.
Address:	4F, NO. 150, LI-TE RD. PEITOU, TAIPEI 112, 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
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
SA150717C01	Original release.	Nov. 09, 2015

1 Certificate of Conformity

Product:	RT-AC1200G Dual Band 2x2 Wireless-AC1200 Gigabit Router
Brand:	ASUS
Test Model:	RT-AC1200G
Sample Status:	Engineering sample
Applicant:	ASUSTek COMPUTER INC.
Test Date:	Oct. 06 ~ Nov. 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 : Celine Chou , **Date:** Nov. 09, 2015

Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Nov. 09, 2015

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 25cm 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)	Modulation Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	802.11b	23.64	5	25	0.093	1
	802.11g	26.97	8.01	25	0.401	1
	802.11n (HT20)	26.76	8.01	25	0.382	1
	802.11n (HT40)	23.04	8.01	25	0.162	1
5180-5240	802.11a	22.32	8.01	25	0.137	1
	802.11n (HT20)	22.20	8.01	25	0.134	1
	802.11n (HT40)	23.84	8.01	25	0.195	1
	802.11ac (VHT80)	18.51	8.01	25	0.057	1
5745-5825	802.11a	28.69	8.01	25	0.596	1
	802.11n (HT20)	28.64	8.01	25	0.589	1
	802.11n (HT40)	27.80	8.01	25	0.485	1
	802.11ac (VHT80)	25.87	8.01	25	0.311	1

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

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 = 0.401 + 0.596 = 0.997

Therefore all the maximum calculations of above situations are less than the “1” limit.

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