

RF Exposure Report

Report No.: SA150212E01

FCC ID: Q87-RE6700

Test Model: RE6700

Received Date: Feb. 12, 2015

Test Date: Feb. 14 ~ Mar. 16, 2015

Issued Date: Mar. 18, 2015

Applicant: Linksys LLC

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Test Location (2): No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.



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Release Control Record

Issue No.	Description	Date Issued
SA150212E01	Original release	Mar. 18, 2015

1 Certificate of Conformity

Product: Wireless Extender

Brand: Linksys

Test Model: RE6700

Sample Status: Engineering sample

Applicant: Linksys LLC

Test Date: Feb. 14 ~ Mar. 16, 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:** Mar. 18, 2015
Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Mar. 18, 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

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

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 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)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	28.76	6.98	25	0.477	1
5180-5240	26.93	8.98	25	0.496	1
5745-5825	26.31	8.98	25	0.430	1

Note:

2.4GHz: Directional gain = 3.97dBi + 10log(2) = 6.98dBi

5GHz: Directional gain = 5.97dBi + 10log(2) = 8.98dBi

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

$$\text{WLAN 2.4G} + \text{WLAN 5.0G} = 0.477 + 0.496 = 0.973$$

Therefore, the maximum calculation of this situation is 0.973, which is less than the "1" limit.

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