RF Exposure Report

Report No.:	SA150812E02
FCC ID:	Q87-RE6300
Test Model:	RE6300
Received Date:	July 31, 2015
Test Date:	Aug. 27, 2015
Issued Date:	Sep. 11, 2015
Applicant:	Linksys LLC
Address:	121 Theory Drive Irvine California 92617 United State
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (3):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA150812E02	Original release.	Sep. 11, 2015

1 Certificate of Conformity

Product:	Wireless Extender
Brand:	Linksys
Test Model:	RE6300
Sample Status:	ENGINEERING SAMPLE
Applicant:	Linksys LLC
Test Date:	Aug. 27, 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 : _____ **Date:** Sep. 11, 2015

Midoli Peng / Specialist

Approved by : _____ , **Date:** Sep. 11, 2015

May Chen / 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 22cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Gain (dBi)	Frequency Range (GHz to GHz)	Antenna Type	Connecter Type	Cable Length (mm)
Chain (0)	3.97	2.4~2.4835	Dipole	i-pex(MHF)	160
	5.97	5.15~5.85			
Chain (1)	3.97	2.4~2.4835	Dipole	i-pex(MHF)	160
	5.97	5.15~5.85			

4 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	750.59	6.98	22	0.61567	1
5180-5240	187.351	8.98	22	0.24356	1
5745-5825	220.008	8.98	22	0.28601	1

NOTE:
2.4GHz: Directional gain = 3.97dBi + 10log(2) = 6.98dBi
5GHz: Directional gain = 5.97dBi + 10log(2) =8.98dBi

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 = 0.61567 + 0.28601 = 0.902

Therefore the maximum calculations of above situations are less than the "1" limit.

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