

RF Exposure Report

Report No.: SABEMT-WTW-P20100622

FCC ID: K7S-08270

Test Model: RE7350

Series Model: RE7310

Received Date: Oct. 26, 2020

Test Date: Nov. 11, 2020

Issued Date: Dec. 15, 2020

Applicant: Belkin International, Inc.

Address: 12045 East Waterfront Drive Playa Vista, CA 90094 United States Of America

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

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

**FCC Registration /
Designation Number:** 723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SABEMT-WTW-P20100622	Original release.	Dec. 15, 2020

1 Certificate of Conformity

Product: LINKSYS RE7350 WIFI 6 RANGE EXTENDER, AX1800
LINKSYS RE7310 WIFI RANGE EXTENDER, AX1800

Brand: Linksys

Test Model: RE7350

Series Model: RE7310

Sample Status: Engineering sample

Applicant: Belkin International, Inc.

Test Date: Nov. 11, 2020

Standards: FCC Part 2 (Section 2.1091)
IEEE C95.3 -2002

References Test Guidance KDB 447498 D01 General RF Exposure Guidance v06

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 : Joyce Kuo , **Date:** Dec. 15, 2020
Joyce Kuo / Specialist

Approved by : Clark Lin , **Date:** Dec. 15, 2020
Clark Lin / Technical 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				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	f/1500	30
1500-100,000	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

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 35cm away from the body of the user.

So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Antenna No.	RF Chain No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	DB1	4.9	2.4~2.4835	PCB	i-pex(MHF)	80
		5.3	5.15~5.25			
		4.8	5.725~5.85			
2	DB2	4.9	2.4~2.4835	PCB	i-pex(MHF)	80
		5.5	5.15~5.25			
		5.1	5.725~5.85			

*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.5 Calculation Result

Operation Mode	Evaluation Frequency (MHz)	Max AV Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/m ²)
WiFi 2.4GHz	2412-2462	516.519	7.91	35	0.20737	1
WiFi 5GHz (U-NII-1)	5180-5240	538.719	8.41	35	0.24267	1
WiFi 5GHz (U-NII-3)	5745-5825	563.029	7.96	35	0.22866	1

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 2.4GHz: Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20})^2 / 2] = 7.91 \text{ dBi}$
5GHz U-NII-1: Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20})^2 / 2] = 8.41 \text{ dBi}$
5GHz U-NII-3: Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20})^2 / 2] = 7.96 \text{ dBi}$

Conclusion:

The formula of calculated the MPE is:

$\text{CPD1} / \text{LPD1} + \text{CPD2} / \text{LPD2} + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$\text{WLAN 2.4GHz} + \text{WLAN 5GHz} = 0.20737 / 1 + 0.24267 / 1 = 0.45004$

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

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