RF Exposure Report

Report No.:	SA200514E05
FCC ID:	K7S-03535
Test Model:	E7350
Received Date:	May 14, 2020
Test Date:	June 05, 2020
Issued Date:	June 18, 2020
Applicant:	Belkin International, Inc.
Address:	12045 East Waterfront Dr. Playa Vista California United States 90094
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
SA200514E05	Original release.	June 18, 2020

1 Certificate of Conformity

Product:	AX1800 Dual-Band WiFi 6 Router
Brand:	Linksys
Test Model:	E7350
Sample Status:	ENGINEERING SAMPLE
Applicant:	Belkin International, Inc.
Test Date:	June 05, 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 :  , **Date:** June 18, 2020

Joyce Kuo / Specialist

Approved by :  , **Date:** June 18, 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

$Pd = (Pout*G) / (4*pi*r^2)$

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 35 cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Antenna NO.	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length (mm)
DB1	Galtronics	3.4	2.4~2.4835GHz	PCB	i-pex(MHF)	58
		3.99	5.15~5.25GHz			
		4.17	5.25~5.35GHz			
		4.74	5.47~5.725GHz			
		5.24	5.725~5.85GHz			
DB2	Galtronics	3.45	2.4~2.4835GHz	PCB	i-pex(MHF)	68
		3.52	5.15~5.25GHz			
		3.00	5.25~5.35GHz			
		3.08	5.47~5.725GHz			
		3.11	5.725~5.85GHz			
DFS Ant (RX only)	Galtronics	2.14	5.15~5.25GHz	metal	none	N/A
		2.86	5.25~5.35GHz			
		3.17	5.47~5.725GHz			
		3.38	5.725~5.85GHz			
BT Ant	Galtronics	4.28	2.4~2.4835GHz	metal	none	N/A

2.5 Calculation Result

Operation Mode	Evaluation Frequency (MHz)	Max. Average Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN (2.4GHz)	2412~2462	583.096	5.85	35	0.14568	1
WLAN (U-NII-1)	5180~5250	880.096	4.91	35	0.17709	1
WLAN (U-NII-3)	5745~5825	979.63	5.44	35	0.22270	1
BT-EDR	2402~2480	2.404	4.28	35	0.00042	1
BT-LE	2402~2480	1.754	4.28	35	0.00031	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 2.4GHz: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.85 dBi
3. 5GHz:
   U-NII-1: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 4.91 dBi
   U-NII-3: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.44 dBi

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 = 0.14568 / 1 + 0.22270 / 1 = 0.36838

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

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