

## RF Exposure Report

**Report No.:** SA200605E14

**FCC ID:** K7S-03628

**Test Model:** MR9600 V2

**Series Model:** MR9610 V2, EA9350 V2

**Received Date:** June 05, 2020

**Test Date:** Sep. 26, 2020

**Issued Date:** Nov. 09, 2020

**Applicant:** Belkin International, Inc.

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

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**Test Location:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
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**FCC Registration /  
Designation Number:** 723255 / TW2022

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### Release Control Record

Issue No.	Description	Date Issued
SA200605E14	Original release.	Nov. 09, 2020

## 1 Certificate of Conformity

**Product:** Dual-Band 802.11ax Wireless Router

**Brand:** Linksys

**Test Model:** MR9600 V2

**Series Model:** MR9610 V2, EA9350 V2

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** Belkin International, Inc.

**Test Date:** Sep. 26, 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 :** Cherry Chuo , **Date:** Nov. 09, 2020  
Cherry Chuo / Specialist

**Approved by :** Clark Lin , **Date:** Nov. 09, 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 <sup>2</sup> )	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 <sup>2</sup> )*	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<sup>2</sup>

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

## 2.4 Antenna Gain

Antenna No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	4.04 3.31	2.4~2.4835 5.15-5.85	Dipole	i-pex(MHF)
2	3.66 3.31	2.4~2.4835 5.15-5.85	Dipole	i-pex(MHF)
3	3.66 3.25	2.4~2.4835 5.15-5.85	Dipole	i-pex(MHF)
4	3.33 3.23	2.4~2.4835 5.15-5.85	Dipole	i-pex(MHF)
Bluetooth	2.7	2.4~2.4835	PIFA	none

Note: 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 of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max. Average Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN (2.4GHz)	2412~2462	984.722	9.70	47	0.33106	1
WLAN (U-NII-1)	5180~5250	948.995	9.30	47	0.29098	1
WLAN (U-NII-2A)	5250~5320	249.921	9.30	47	0.07663	1
WLAN (U-NII-2C)	5500~5700	245.213	9.30	47	0.07519	1
WLAN (U-NII-3)	5745~5825	979.87	9.30	47	0.30044	1
BT-LE	2402~2480	5.821	2.70	47	0.00039	1

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 2.4GHz: Directional gain =  $10 \log[10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20}]^2 / 4] = 9.70 \text{ dBi}$
- 5GHz: Directional gain =  $10 \log[(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 4] = 9.30 \text{ dBi}$

### Simultaneously transmission condition

Condition	Technology	
1	WLAN (2.4GHz)	WLAN (5GHz)
2	WLAN (2.4GHz)	Bluetooth
3	WLAN (5GHz)	Bluetooth

### Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$$\text{WLAN 2.4GHz} + \text{WLAN 5GHz} = 0.33106 / 1 + 0.30044 / 1 = 0.63150$$

$$\text{WLAN 2.4GHz} + \text{Bluetooth} = 0.33106 / 1 + 0.00039 / 1 = 0.33145$$

$$\text{WLAN 5GHz} + \text{Bluetooth} = 0.30044 / 1 + 0.00039 / 1 = 0.30083$$

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

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