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.

Address: 12045 East Waterfront Drive Playa Vista, CA. 90094, USA

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

Table of Contents

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 :   ,   **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^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 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/cm²)	Limit (mW/cm²)
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:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 2.4GHz: Directional gain = $10 \log[10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 4] = 9.70$ dBi
3. 5GHz: Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 4] = 9.30$ 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 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.33106 / 1 + 0.30044 / 1 = 0.63150

WLAN 2.4GHz + Bluetooth = 0.33106 / 1 + 0.00039 / 1 = 0.33145

WLAN 5GHz + Bluetooth = 0.30044 / 1 + 0.00039 / 1 = 0.30083

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

--- END ---