RF Exposure Report

Report No.:	SA191115E03
FCC ID:	Q87-08162
Test Model:	MR6350
Series Model:	MR6340, MR6330, MR6320
Received Date:	Nov. 15, 2019
Test Date:	Nov. 28, 2019
Issued Date:	Feb. 12, 2020
Applicant:	LINKSYS LLC
Address:	121 Theory Drive Irvine California 92617 United States
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
SA191115E03	Original release.	Feb. 12, 2020

1 Certificate of Conformity

Product:	Linksys MR6350 Dual-Band WiFi 5 Router, AC1300
Brand:	Linksys
Test Model:	MR6350
Series Model:	MR6340, MR6330, MR6320
Sample Status:	ENGINEERING SAMPLE
Applicant:	LINKSYS LLC
Test Date:	Nov. 28, 2019
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.3-2002

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 : Vivian Huang , **Date:** Feb. 12, 2020

Vivian Huang / Specialist

Approved by : , **Date:** Feb. 12, 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 35cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

WLAN ANTENNA SPEC.						
Antenna NO.	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length (mm)
1	ANEP5M2-CCG03-EH	2.93	2.4~2.4835GHz	Dipole	i-pex(MHF)	165
		3.18	5.15~5.25GHz			
		3.18	5.25~5.35GHz			
		3.13	5.47~5.725GHz			
		3.17	5.725~5.85GHz			
2	ANEP5M2-CCG04-EH	2.82	2.4~2.4835GHz	Dipole	i-pex(MHF)	335
		2.95	5.15~5.25GHz			
		2.95	5.25~5.35GHz			
		2.78	5.47~5.725GHz			
		2.85	5.725~5.85GHz			
BLUETOOTH ANTENNA SPEC.						
1	ANTS1M1-CCG00-EH	2.9	2.4~2.4835GHz	Metal	none	N/A

2.5 Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN 2.4GHz	2437	827.288	5.89	35	0.20860	1
WLAN 5GHz U-NII-1	5240	461.906	6.08	35	0.12168	1
WLAN 5GHz U-NII-3	5745	671.324	6.02	35	0.17442	1
BT-EDR	2480	9.376	2.90	35	0.00364	1
BT-LE	2480	5.047	2.90	35	0.00148	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[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.89dBi
   5GHz U-NII-1: Directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.08dBi
   5GHz U-NII-3: Directional gain =10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.02dBi
   Bluetooth: Directional gain = 2.90dBi

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=0.20860 / 1 + 0.17442 / 1= 0.38302

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

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