RF Exposure Report

Report No.:	SA170407E01
FCC ID:	S9GH320
Model No.:	H320
Received Date:	Apr. 07, 2017
Test Date:	May 02 to 03, 2017
Issued Date:	May 26, 2017
Applicant:	Ruckus Wireless, Inc.
Address:	350 West Java Drive, Sunnyvale, CA 94089
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 R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA170407E01	Original release.	May 26, 2017

1 Certificate of Conformity

Product:	H320 Access Point
Brand:	Ruckus
Model No.:	H320
Sample Status:	ENGINEERING SAMPLE
Applicant:	Ruckus Wireless, Inc.
Test Date:	May 02 to 03, 2017
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992

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:** May 26, 2017

Wendy Wu / Specialist

Approved by : _____ , **Date:** May 26, 2017

May Chen / 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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

No.	PCB Chain No	Brand	Model	Antenna Gain(dBi)	Frequency range	Antenna Type	Connector type
1	Chain 0	Ruckus	H320 Hpol	1	2.4~2.4835GHz	Printed	I-pex
				3	5.15~5.85GHz		
2	Chain 1	Ruckus	H320 Vpol	1	5.15~5.85GHz	Printed	I-pex

2.5 Calculation Result of Maximum Conducted Power

Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	70.795	1	20	0.01773	1
5180-5240	158.866	5.07	20	0.10157	1
5745-5825	141.59	5.07	20	0.09052	1

NOTE:
5GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.07$dBi

NOTE: 1. This power include tune-up tolerance range that specified in H320 Tune Up power table

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 = 0.01773 / 1 + 0.10157 / 1 = 0.11930
Therefore the maximum calculations of above situations are less than the "1" limit.

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