RF Exposure Report

Report No.:	SA151112D02
FCC ID:	P27RP151
Test Model:	RP151
Series Model:	RP151xxxxxxxx (The “x” in model name can be 0 to 9, A to Z, blank or “- “ , for marking purpose)
Received Date:	Nov. 12, 2015
Test Date:	Nov. 18 ~ 27, 2015
Issued Date:	Dec. 3, 2015
Applicant:	Sercomm Corp.
Address:	8F, No. 3-1, YuangQu St., NanKang, Taipei 115, Taiwan, R.O.C. (NanKang Software Park)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
SA151112D02	Original release.	Dec. 3, 2015

1 Certificate of Conformity

Product:	Selectable Dual Band WiFi Adapter
Brand:	Sercomm
Test Model:	RP151
Series Model:	RP151xxxxxxxx (The “x” in model name can be 0 to 9, A to Z, blank or “-“ , for marking purpose)
Sample Status:	Engineering sample
Applicant:	Sercomm Corp.
Test Date:	Nov. 18 ~ 27, 2015
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 IEEE C95.1

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:** Dec. 3, 2015

Celia Chen / Supervisor

Approved by :  , **Date:** Dec. 3, 2015

Rex Lai / Assistant 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				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

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 30cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	28.73	7.64	30	0.3833	1
5180-5240	18.17	7.12	30	0.0299	1
5745-5825	20.71	7.12	30	0.0536	1

NOTE:
2.4GHz: Directional gain = 4.63dBi + 10log(2) = 7.64dBi
5.0GHz: Directional gain = 4.11dBi + 10log(2) = 7.12dBi

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 = 0.3833/1 + 0.0536/1 = 0.4369

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

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