RF Exposure Report

Report No.:	SA150413C26
FCC ID:	TVE-26155055
Model:	FAP-S322CR
Series Model:	FortiAP-S322CRxxxxxx, FAP-S322CRxxxxxx, FORTIAP-S322CRxxxxxx (where “x” can be used as “A-Z”, or “0-9”, or “-“, or blank for software changes or marketing purposes only)
Received Date:	Apr. 13, 2015
Test Date:	Jun. 05 ~ Jul. 17, 2015
Issued Date:	Jul. 28, 2015
Applicant:	Fortinet lnc.
Address:	899 Kifer Road Sunnyvale, CA 94086 USA
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
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA150413C26	Original release.	Jul. 28, 2015

1 Certificate of Conformity

Product:	Secured Wireless Access Point
Brand:	Fortinet Inc.
Model:	FAP-S322CR
Series Model:	FortiAP-S322CRxxxxxx, FAP-S322CRxxxxxx, FORTIAP-S322CRxxxxxx (where “x” can be used as “A-Z”, or “0-9”, or “-“, or blank for software changes or marketing purposes only)
Sample Status:	Engineering sample
Applicant:	Fortinet Inc.
Test Date:	Jun. 05 ~ Jul. 17, 2015
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D03 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:** Jul. 28, 2015
Polly Chien / Specialist

Approved by : _____ , **Date:** Jul. 28, 2015
Ken Liu / Senior 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 34cm 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	29.93	9.66	34	0.626	1
5180-5240	23.19	10.8	34	0.173	1
5745-5825	25.87	10.8	34	0.320	1

Note:
2.4GHz: Directional gain =4.89dBi + 10log(3) = 9.66dBi
5GHz: Directional gain =6.03dBi + 10log(3) = 10.8dBi

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 = 0.626 + 0.320 = 0.946
Therefore all the maximum calculations of above situations are less than the “1” limit.

---END---