

RF Exposure Report

Report No.: MFBDYS-WTW-P23110748A

FCC ID: TVE-240607

Test Model: FBS-10F-WiFi

Series Model: FortiBranchSASE-10F-WiFixxxxxxxxxx, FBS-10F-WiFixxxxxxxxxxx,

FORTIBRANCHSASE-10F-WiFixxxxxxxxx (where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes

only)

Received Date: 2024/2/29

Test Date: 2024/2/29 ~ 2024/4/6

Issued Date: 2024/10/4

Applicant: Fortinet, Inc.

Address: 909 Kifer Road Sunnyvale, Ca. 94086

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lin Kou Laboratories

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

FCC Registration / 788550 / TW0003

Designation Number:





This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Report No.: MFBDYS-WTW-P23110748A Page No. 1 / 7 Report Format Version: 6.1.1 Reference No.: BDYS-WTW-P24090510



Classification ______5

2.3

3



Release Control Record

Issue No.	Description	Date Issued
MFBDYS-WTW-P23110748A	Original Release	2024/10/4

Report No.: MFBDYS-WTW-P23110748A Page No. 3 / 7 Reference No.: BDYS-WTW-P24090510 Page No. 3 / 7



Certificate of Conformity

Product: Secured Wireless Access Point

Brand: FORTINET

Test Model: FBS-10F-WiFi

Series Model: FortiBranchSASE-10F-WiFixxxxxxxxxx, FBS-10F-WiFixxxxxxxxxxx,

FORTIBRANCHSASE-10F-WiFixxxxxxxxxx (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: 2024/2/29 ~ 2024/4/6

FCC Rule Part: FCC Part 2 (Section 2.1091)

Standards: KDB 447498 D01 General RF Exposure Guidance v06

Jeremy Lin / Project Engineer

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 RF characteristics under the conditions specified in this report.

Prepared by :	Lena Wang	, Date:	2024/10/4	
	Lena Wang / Specialist			
	1 - 1.			
Approved by :	Jeremy Lin	, Date:	2024/10/4	

Report No.: MFBDYS-WTW-P23110748A Reference No.: BDYS-WTW-P24090510

Page No. 4 / 7



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/cm²)	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/cm²

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 21cm away from the body of the user. So, this device is classified as **Mobile Device**.

Report No.: MFBDYS-WTW-P23110748A Reference No.: BDYS-WTW-P24090510



3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Average Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)
WLAN					
		CDD	Mode		
2412-2462	26.01	7.38	21	0.394	1
5180-5240	25.55	8.36	21	0.444	1
5260-5320	23.93	8.36	21	0.306	1
5500-5720	23.93	8.36	21	0.306	1
5745-5825	24.41	8.36	21	0.341	1
		Beamform	ning Mode		
2412-2462	25.04	7.38	21	0.315	1
5180-5240	25.55	8.36	21	0.444	1
5260-5320	21.56	8.36	21	0.177	1
5500-5720	21.43	8.36	21	0.172	1
5745-5825	24.41	8.36	21	0.341	1
BT LE					
2402-2480	5.43	3.6	21	0.001	1

Note:

- 1. Directional gain:
 - 2.4GHz Band: Directional gain = 10 log[$(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2$] = 7.38dBi 5GHz: Directional gain = 10 log[$(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2$] = 8.36dBi
- 2. Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.
- 3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 4. This report is issued as a supplementary report to the original BV CPS report no.: MFBDYS-WTW-P23110748 R1. The differences compared with the original report is adding 5.26GHz to 5.32GHz and 5.50GHz to 5.720GHz by software.



Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 +etc. < 1

CPD = Calculation power density

LPD = Limit of power density

The simultaneous operation mode was determined by client.

No	Mode
1	WLAN 2.4G+ WLAN 5GHz =0.394/1+0.444/1=0.838
2	WLAN 5GHz + BLE =0.444/1+0.001/1=0.445

^{*}WLAN 2.4G and BT technologies cannot transmit at same time.

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

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Report No.: MFBDYS-WTW-P23110748A Page No. 7 / 7 Reference No.: BDYS-WTW-P24090510