



RF EXPOSURE EVALUATION REPORT

FCC ID : TVE-240502
Equipment : Network Switch
Brand Name : FORTINET
Model Name : FortiBranchSASE 20G-WiFixxxxxxxxxxx,
FORTIBRANCHSASE-20G-WiFixxxxxxxxxxx,
FBS-20G-WiFixxxxxxxxxxx (where “x” can be used as
“A-Z”, or “0-9”, or “-“, or blank for software changes or
marketing purposes only)
Applicant : Fortinet, Inc.
909 Kifer Road, Sunnyvale, CA. 94086 USA
Manufacturer : Fortinet, Inc.
909 Kifer Road, Sunnyvale, CA. 94086 USA
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA471026	Rev. 01	Initial issue of report	Nov. 06, 2024



1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Network Switch
Brand Name	FORTINET
Model Name	FortiBranchSASE 20G-WiFixxxxxxxxxx, FORTIBRANCHSASE-20G-WiFixxxxxxxxxx, FBS-20G-WiFixxxxxxxxxx (where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)
FCC ID	TVE-240502
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/HE20/HE40/HE80 Bluetooth LE

Reviewed by: Jason Wang

Report Producer: Paula Chen

2. Maximum RF average output power among production units

Mode	Maximum Average Power (dBm)
2.4GHz WLAN	30
5.2GHz WLAN	30
5.3GHz WLAN	24
5.5GHz WLAN	24
5.8GHz WLAN	30
Bluetooth LE	7.5



3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Table with 5 columns: Frequency range (MHz), Electric field strength (V/m), Magnetic field strength (A/m), Power density (mW/cm²), Averaging time (minutes). It is divided into two sections: (A) Limits for Occupational/Controlled Exposures and (B) Limits for General Population/Uncontrolled Exposure.

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

S = PG / (4πR²)

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum PG (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
WLAN2.4GHz Band	3.31	30.0	2142.89	0.427	1.000
WLAN5GHz Band	4.84	30.0	3047.89	0.607	1.000
Bluetooth	3.57	7.5	12.79	0.003	1.000

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.