RF EXPOSURE EVALUATION REPORT

FCC ID	:	**TVE-111T15B**
Equipment	:	**Network Security Gateway**
Brand Name	:	**FORTINET**
Model Name	:	**FortiGate 100Fxxxxxx; FG-100Fxxxxxx; FORTIGATE-100Fxxxxxx FortiGate 101Fxxxxxx; FG-101Fxxxxxx; FORTIGATE-101Fxxxxxx (where "x" can be "A-Z", or "0-9", or "-", or blank for software purposes or marketing purposes only)**
Marketing Name	:	**FortiGate 100F, FortiGate 101F**
Applicant	:	**Fortinet Inc. 899 KIFER RD SUNNYVALE CA 94086 UNITED STATES**
Manufacturer	:	**Fortinet Inc. 899 KIFER RD SUNNYVALE CA 94086 UNITED STATES**
Standard	:	**47 CFR Part 2.1091**

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 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.

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA081918	Rev. 01	Initial issue of report	Nov. 25, 2020

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Network Security Gateway
Brand Name	FORTINET
Model Name	FortiGate 100Fxxxxxx; FG-100Fxxxxxx; FORTIGATE-100Fxxxxxx FortiGate 101Fxxxxxx; FG-101Fxxxxxx; FORTIGATE-101Fxxxxxx (where “x” can be “A-Z”, or “0-9”, or “-“, or blank for software purposes or marketing purposes only)
Marketing Name	FortiGate 100F, FortiGate 101F
FCC ID	TVE-111T15B
Wireless Technology and Frequency Range	Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	Bluetooth LE
HW Version	-1M
SW Version	1.04.01
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Carlie Tsai

2. Maximum RF average output power among production units

Mode	Average power (dBm)	
	LE	
	1Mbps	2Mbps
Tune-up Limit	2	2

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.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

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:

$$S = \frac{PG}{4\pi R^2}$$

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 EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
Bluetooth	0.78	2.00	2.780	0.002	1.897	0.00038	1.00000

Conclusion:

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