



# RF EXPOSURE EVALUATION REPORT

FCC ID : TVE-250201  
Equipment : Network Security Gateway  
Brand Name : **FORTINET**  
Model Name : FortiGate 70G-POExxxxxxxxxx, FORTIGATE-70G-POExxxxxxxxxx,  
FG-70G-POExxxxxxxxxx,  
FortiGate 71G-POExxxxxxxxxx, FORTIGATE-71G-POExxxxxxxxxx,  
FG-71G-POExxxxxxxxxx  
(where "x" can be used as "0-9", or "A-Z", or "-", or blank for software  
changes or marketing purposes only)  
Applicant : Fortinet, Inc.  
909 Kifer Rd, Sunnyvale, CA 94086, United States  
Manufacturer : Fortinet, Inc.  
909 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 Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code:  
3786) and the FCC designation No. TW3786 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.

Cona Huang

Approved by: Cona Huang / Deputy Manager



**SPORTON INTERNATIONAL INC. Wensan Laboratory**  
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan



## **Table of Contents**

1. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT) .....	4
2. MAXIMUM RF AVERAGE OUTPUT POWER AMONG PRODUCTION UNITS .....	4
3. RF EXPOSURE LIMIT INTRODUCTION .....	5
4. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION .....	5
4.1. Standalone Power Density Calculation .....	5



## History of this test report



## 1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Network Security Gateway
Brand Name	 FORTINET
Model Name	FortiGate 70G-POExxxxxxx, FORTIGATE-70G-POExxxxxxx, FG-70G-POExxxxxxx, FortiGate 71G-POExxxxxxx, FORTIGATE-71G-POExxxxxxx, FG-71G-POExxxxxxx (where "x" can be used as "0-9", or "A-Z", or "-", or blank for software changes or marketing purposes only)
FCC ID	TVE-250201
Wireless Technology and Frequency Range	Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	Bluetooth LE

Reviewed by: Jason Wang

Report Producer: Paula Chen

## 2. Maximum RF average output power among production units

Band	Tune-up Power (dBm)
Bluetooth	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.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	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)	Maximum EIRP (mW)	Power Density at 20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
Bluetooth	1.53	7.50	9.03	0.01	8.00	0.002	1.000

#### Conclusion:

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