

# TEST REPORT

of

## FCC MPE REQUIREMENT

☒ New Application; ☐ Class I PC; ☐ Class II PC

**Product :** FortiWiFi 61F, FortiWiFi 60F

**Brand:** FORTINET

**Model:** FortiWiFi 60Fxxxxxx; FWF-60Fxxxxxx;  
FORTIWIFI-60Fxxxxxx;  
FortiWiFi 61Fxxxxxx; FWF-61Fxxxxxx;  
FORTIWIFI-61Fxxxxxx;  
(where “x” can be used “A-Z”, or “0-9”, or “-“, or  
blank for software purposes or marketing  
purposes only)

**Model Difference:** 61 series had SSD

**FCC ID:** TVE-121757A

**Applicant:** Fortinet Inc.

**Address:** 899 KIFER RD SUNNYVALE CA 94086-5301  
UNITED STATES

**Test Performed by:**  
**International Standards Laboratory Corp.**

<LT Lab.>

\*Site Registration No.

BSMI: SL2-IN-E-0013; MRA TW0997; TAF: 0997; IC: IC4067B-4;

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Report No.: **ISL-19LR269FMPE-B**

Issue Date : **2020/04/16**

Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein.

This report MUST not be used to claim product endorsement by TAF, NVLAP or any agency of the Government.

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## VERIFICATION OF COMPLIANCE

**Applicant:** Fortinet Inc.

**Product Description:** FortiWiFi 61F, FortiWiFi 60F

**Brand Name:** FORTINET

**Model No.:** FortiWiFi 60Fxxxxxx; FWF-60Fxxxxxx;  
FORTIWIFI-60Fxxxxxx; FortiWiFi 61Fxxxxxx;  
FWF-61Fxxxxxx; FORTIWIFI-61Fxxxxxx;  
(where "x" can be used "A-Z", or "0-9", or "-", or blank for software purposes or marketing purposes only)

**Model Difference:** 61 series had SSD

**FCC ID:** TVE-121757A

**Date of test:** 2019/09/09 ~ 2020/04/10

**Date of EUT Received:** 2019/09/09

### We hereby certify that:

All the tests in this report have been performed and recorded in accordance with the standards described above and performed by an independent electromagnetic compatibility consultant, International Standards Laboratory Corp.

The test results contained in this report accurately represent the measurements of the characteristics and the energy generated by sample equipment under test at the time of the test. The sample equipment tested as described in this report is in compliance with the limits of above standards.

**Test By:**

*Weitin Chen*

**Date:**

2020/04/16

*Weitin Chen / Senior Engineer*

**Prepared By:**

*Gigi yeh*

**Date:**

2020/04/16

*Gigi Yeh / Senior Engineer*

**Approved By:**

*Jerry Liu*

**Date:**

2020/04/16

*Jerry Liu / Technical Manager*

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## 1. Maximum Permissible Exposure (MPE)

### 1.1 Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
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
1500-15000	/	/	1.0	30

F = frequency in MHz

\* = Plane-wave equipment power density

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.

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

## 1.2 Maximum Permissible Exposure (MPE) Evaluation

20
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cm

Frequency band	Max. Tune-Up Power (dBm)	Antenna gain (dBi)	EIRP (dBm)	MPE (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
CDD Mode					
5260-5320	23.62	3.23	26.850	0.096	1
5500-5725	23.24	3.46	26.700	0.093	1
BF Mode					
5260-5320	21.35	8	29.350	0.171	1
5500-5725	21.58	8.23	29.810	0.190	1

Note:

1. For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.

- End of Report -