

Radio Exposure Evaluation Report

FCC ID : TVE-260105
Equipment : Secured Wireless Access Point
Brand Name : FORTINET
Model Name : FAP-221Kxxxxxxxxxx, FortiAP 221Kxxxxxxxxxx,
FORTIAP-221Kxxxxxxxxxx
(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 FCC Part 2 Subpart J, section 2.1091

The product was received on Dec. 24, 2025, and testing was started from Jan. 15, 2026 and completed on Jan. 16, 2026. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR FCC Part 2 Subpart J, section 2.1091 and shown compliance with the applicable technical standards.

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


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory
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Photographs of EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FA5D1918	01	Initial issue of report	Mar. 17, 2026
FA5D1918	02	Revised typo. (This report is the latest version replacing for the report issued on Mar. 17, 2026.)	Apr. 01, 2026



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

None

Reviewed by: Barry Hsiao

Report Producer: Michelle Tsai

1 General Description

1.1 Information

1.1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850 5850-5895	5180-5240 5260-5320 5500-5720 5745-5825 5845-5885	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
Bluetooth	2400-2483.5	2402-2480	LE: DSSS (GFSK)

**1.1.2 Antenna Information**

Ant.	Brand Name	Model Name	Antenna Type	Connector	Support	Radio
1	WNC	95XPAD15.GEE	PIFA	I-Pex	2.4G+5G	Radio 1:2.4G Radio 2:5G
2	WNC	95XPAD15.GEF	PIFA	I-Pex	2.4G+5G	Radio 1:2.4G Radio 2:5G
3	WNC	95XPAD15.GEG	PIFA	I-Pex	BT	BT

Ant.	Port	Gain (dBi)						
		2.4G	5G					BT
			UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-4	
1	1	5.76	5.99	5.46	4.39	4.86	4.76	-
2	2	3.47	4.41	4.31	4.54	4.35	3.83	-
3	1	-	-	-	-	-	-	3.57

Note 1: The EUT has three antennas.

For 2.4GHz function:

For IEEE 802.11 b/g/n/ax/be mode (2TX/2RX)

Ant. 1 (port 1), Ant. 2 (port 2) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX)

Ant. 1 (port 1), Ant. 2 (port 2) could transmit/receive simultaneously.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 3 (port 1) could transmit/receive.

1.1.3 Table for Multiple Listing

Model Name	Description
FAP-221Kxxxxxxxxxx	All the models are identical, the difference model served as marketing strategy.
FortiAP 221Kxxxxxxxxxx	
FORTIAP-221Kxxxxxxxxxx	

Note 1: Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only.

Note 2: From the above models, model: FAP-221K was selected as representative model for the test and its data was recorded in this report.

1.1.4 Accessories

Accessories				
Mounting Bracket	Brand Name	Qisda	Model Name	6B.PRANQ.009

Reminder: Regarding to more detail and other information, please refer to user manual.

1.2 Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory			
☒	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)	
		TEL: 886-3-327-3456	FAX: 886-3-327-0973
Test site Designation No. TW3785 with FCC.			
☐	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)	
		TEL: 886-3-318-0787	FAX: 886-3-318-0287
Test site Designation No. TW0008 with FCC.			

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f ²)*	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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	F/1500	30
1500-100,000	-	-	1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

Multiple Transmitters Condition

Co-location as simultaneously transmitting (co-transmitting) and the evaluation shall be consider that simultaneous transmissions from co-located devices the individual transmitters are evaluated separately. After sum of the individual value (basic restriction / reference level) are measured/calculated also have to under basic restriction / reference level.

Co-transmitting mode: Radio 1:2.4G + Radio 2:5G + Bluetooth

2.2 MPE Calculation Method

The MPE was calculated at 26 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Non-Beamforming

WLAN 2.4GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (W/m ²)	S Limit (W/m ²)	S/Limit Ratio
2.4G;G1D	5.76	28.27	34.03	0.50	34.53	26	0.33407	1.00000	0.33407
2.4G;D1D	5.76	27.86	33.62	0.50	34.12	26	0.30398	1.00000	0.30398

WLAN 5GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (W/m ²)	S Limit (W/m ²)	S/Limit Ratio
5.2G;D1D	5.99	28.04	34.03	0.50	34.53	26	0.33407	1.00000	0.33407
5.3G;D1D	5.46	23.73	29.19	0.50	29.69	26	0.10961	1.00000	0.10961
5.6G;D1D	4.54	23.92	28.46	0.50	28.96	26	0.09265	1.00000	0.09265
5.8G;D1D	4.86	28.77	33.63	0.50	34.13	26	0.30468	1.00000	0.30468
5.81G;D1D	4.76	27.10	31.86	0.50	32.36	26	0.20270	1.00000	0.20270

Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (W/m ²)	S Limit (W/m ²)	S/Limit Ratio
2.4G;BT-LE	3.57	19.04	22.61	0.50	23.11	26	0.02409	1.00000	0.02409

Beamforming

WLAN 2.4GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (W/m ²)	S Limit (W/m ²)	S/Limit Ratio
2.4G;D1D	7.70	27.02	34.72	0.50	35.22	26	0.39160	1.00000	0.39160

WLAN 5GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (W/m ²)	S Limit (W/m ²)	S/Limit Ratio
5.2G;D1D	8.25	27.08	35.33	0.50	35.83	26	0.45065	1.00000	0.45065
5.3G;D1D	7.91	21.67	29.58	0.50	30.08	26	0.11991	1.00000	0.11991
5.6G;D1D	7.48	21.98	29.46	0.50	29.96	26	0.11664	1.00000	0.11664
5.8G;D1D	7.62	27.67	35.29	0.50	35.79	26	0.44652	1.00000	0.44652
5.81G;D1D	7.32	27.10	34.42	0.50	34.92	26	0.36546	1.00000	0.36546



Simultaneous Transmission Analysis Mode:

Radio 1:2.4G + Radio 2:5G + Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (W/m ²)	S Limit (W/m ²)	S/Limit Ratio
2.4G;D1D	7.70	27.02	34.72	0.50	35.22	26	0.39160	1.00000	0.39160
5.2G;D1D	8.25	27.08	35.33	0.50	35.83	26	0.45065	1.00000	0.45065
2.4G;BT-LE	3.57	19.04	22.61	0.50	23.11	26	0.02409	1.00000	0.02409
								Sum Ratio	0.86634
								Ratio Limit	1

————THE END————