

MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

Applicant: Anker Innovations Limited

Address: Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong

Product Name: eufy FamiLock E35, eufy FamiLock E34

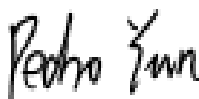
FCC ID: 2AOKB-T85P1

Standard(s): 47 CFR §1.1310, 47 CFR §2.1091,
47 CFR §15.247(i)

Report Number: 2502P43175E-RF-00E

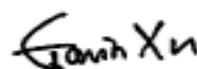
Report Date: 2025/3/3

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).



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GENERAL INFORMATION

General Description Of Equipment under Test

EUT Name:	eufy FamiLock E35, eufy FamiLock E34
EUT Model:	T85P1
Multiple Model:	T85P0
Rated Input Voltage:	DC 3.6V from battery or DC 5V from USB
EUT Received Date:	2025/1/24
EUT Received Status:	Good
Note: There are two models: T85P1 and T85P0, the difference between them is T85PO locks by timing, and T85P1 senses the door status through sensor to determine whether it is locked. Please refer to the declaration letter for more detail, which was provided by manufacturer.	

RF EXPOSURE EVALUATION (MPE)

RF Exposure Evaluation

Applicable Standard

According to subpart 15.247(i), and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (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

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

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

Calculation formula

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Data:

Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance [▲]		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
BLE	2402-2480	2.42	1.75	6.5	4.47	20.00	0.0016	1.0
2.4G WiFi	2412-2462	2.58	1.81	23.5	223.87	20.00	0.0807	1.0
24G Radar	24058-24238	2	1.58	1.42	1.39	20.00	0.0004	1.0

Note:

24G Radar: E Field@3m is 98.62 dBuV/m =3.42dBm

E[dBuV/m] = EIRP[dBm] + 95.2 for d = 3 m.

Conducted output power=EIRP-Gain=3.42-2dBm=1.42dBm

Note:

The Conducted output power including Tune-up Tolerance provided by manufacturer.

For Simultaneous transmission:

BLE, 2.4G WiFi, and 24G Radar can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$$= S_{2.4G\ WiFi} / S_{limit-2.4G\ WiFi} + S_{BLE} / S_{limit-BLE} + S_{24G\ Radar} / S_{limit-24G\ Radar}$$

$$= 0.0807/1.0 + 0.0016/1.0 + 0.0004/1.0$$

$$= 0.08$$

$$< 1.0$$

Result: The device meet FCC MPE at 20 cm distance

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2502P43175E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2502P43175E-RF-INP EUT INTERNAL PHOTOGRAPHS.

******* END OF REPORT *******