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TEST REPORT

FCC MPE Test for HP200

APPLICANT
Smart eLock Co., LTD.

REPORT NO.
HCT-RF-2108-FC035

DATE OF ISSUE
August 24, 2021

Tested by
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Additional model
HP200E, HP200-1,HP200-2, HP200-3, HP200E-1,HP200E-2, HP200E-3

Applicant	**Smart eLock Co., LTD.** 402, 403, Bi-dong, 4, 215, Galmachi-ro, Jungwon-gu, Seongnam-si Gyeonggi-do, Rep. of Korea (Sangdaewon-dong, Geumgang Penterium Tower)
Eut Type Model Name	HOTEL LOCK HP200
FCC ID	2AQAVHP200
Date of Receipt	August 09, 2021
Frequency range	2 402 MHz ~ 2 480 MHz (Bluetooth) 2 405 MHz ~ 2 480 MHz (Zigbee)

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	August 24, 2021	Initial Release

The measurements shown in this report were made in accordance with the procedures specified in § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

RF Exposure Statement

1. Limit

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

(B) Limits for General Population/Uncontrolled Exposures

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

2. Maximum Permissible Exposure Prediction

Prediction of MPE limit at a given distance

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

S = Power density

P = Power input to antenna

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

R = Distance to the center of radiation of the antenna

3. RESULTS

3-1. Zigbee

Max Peak output Power at antenna input terminal	7.00	dBm
Max Peak output Power at antenna input terminal	5.01	mW
Prediction distance	20.00	cm
Prediction frequency	2405 – 2480	MHz
Antenna Gain(typical)	3.50	dBi
Antenna Gain(numeric)	2.239	-
Power density at prediction frequency(S)	0.0022	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

2.1091

EIRP	10.50	(dBm)
ERP	8.35	(dBm)
ERP	0.007	(W)
ERP Limit	3.00	(W)
MARGIN	26.42	(dB)

3-1. BT LE

Max Peak output Power at antenna input terminal	0.00	dBm
Max Peak output Power at antenna input terminal	1.00	mW
Prediction distance	20.00	cm
Prediction frequency	2402 – 2480	MHz
Antenna Gain(typical)	3.50	dBi
Antenna Gain(numeric)	2.239	-
Power density at prediction frequency(S)	0.0004	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

2.1091

EIRP	3.50	(dBm)
ERP	1.35	(dBm)
ERP	0.001	(W)
ERP Limit	3.00	(W)
MARGIN	33.42	(dB)

3-1. NFC

NFC Fundmental Peak Power :	12.19	dBuV/m
EIRP	-83.04	dBm
EIRP	0.000000004966	mW
Prediction distance	20.00	cm
Power density at prediction frequency(S)	0.000000000001	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2