

## RF Exposure Evaluation Report

**Report Reference No.**.....: **MTEB25040158-H**

**FCC ID**.....: **2BOW3-Q7**

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**Representative Laboratory Name.:** **Shenzhen Most Technology Service Co., Ltd.**

Address.....: No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,  
Nanshan, Shenzhen, Guangdong, China.

**Applicant's name**.....: **Foshan Honglin Lock Industry Co., LTD.**

Address.....: One of the second floor, No.1, West Line Industrial Zone,  
Lishui Town, Nanhai District, Foshan City, Guangdong, China

**Test specification/ Standard**.....: **47 CFR Part 1.1307; 47 CFR Part 1.1310**  
**KDB447498D01 General RF Exposure Guidance v06**

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

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**Test item description**.....: intelligent lock

Trade Mark.....: N/A

Model/Type reference.....: Q7

Listed Models .....: N/A

Modulation Type.....: b: DSSS  
g/n: OFDM

Operation Frequency.....: From 2412MHz~2462MHz

Hardware Version.....: V1.0

Software Version.....: V1.0

Rating.....: DC 5V by USB Port

Result.....: **PASS**

TEST REPORT

Equipment under Test : intelligent lock

Model /Type : Q7

Listed Models : N/A

Remark N/A

Applicant : Foshan Honglin Lock Industry Co., LTD.

Address : One of the second floor, No.1,West Line Industrial Zone,  
Lishui Town,Nanhai District,Foshan City, Guangdong,China

Manufacturer : Foshan Honglin Lock Industry Co., LTD.

Address : One of the second floor, No.1,West Line Industrial Zone,  
Lishui Town,Nanhai District,Foshan City, Guangdong,China

Test Result:	PASS
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The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.04.14	Initial Issue	Alisa Luo

## 2. SAR Evaluation

### 2.1 RF Exposure Compliance Requirement

#### 2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 2.1.2 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$  Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$R$  = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.

**2.1.3 EUT RF Exposure****WIFI 2.4G**

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	10.01	$10.01 \pm 1$	11.01
Middle(2437MHz)	10.64	$10.64 \pm 1$	11.64
Highest(2462MHz)	11.14	$11.14 \pm 1$	12.14

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	12.66	$12.66 \pm 1$	13.66
Middle(2437MHz)	12.93	$12.93 \pm 1$	13.93
Highest(2462MHz)	13.41	$13.41 \pm 1$	14.41

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	11.92	$11.92 \pm 1$	12.92
Middle(2437MHz)	12.32	$12.32 \pm 1$	13.32
Highest(2462MHz)	12.74	$12.74 \pm 1$	13.74

**WIFI 2.4G**

Worst case: 802.11g						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit	Result
Highest(2462MHz)	14.41	27.61	2.54	0.0098	1.0	Pass

Note: 1) Refer to report MTEB25040158-R for EUT test Max Conducted average Output Power value.

Note: 2)  $P_d = (P_{out} * G) / (4 * \pi * R^2) = (27.61 * 1.79) / (4 * 3.1416 * 20^2) = 0.0098$

.....**THE END OF REPORT**.....