



# MPE REPORT

## FCC ID: 2A3H3-DY001

Product	:	Smart Door Lock
Model Name	:	DY001/DY001G/DY002B/DY002BG/DY003B/DY003BG/DY004B/ DY004BG/DY005B/DY005BG
Brand	:	SECUSTONE
Report No.	:	PTC21072800901E-FC03
<b>Prepared for</b>		
Shenzhen Chitongda Security Technology Co., Ltd.		
701-702, Block C, Academy Industrialization Multiple- use Building, Shenzhen Virtual University Park, No. 2, Yuexing 3rd Road, Nanshan District, Shenzhen		
<b>Prepared by</b>		
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## 1 TEST RESULT CERTIFICATION

Applicant's name : Shenzhen Chitongda Security Technology Co., Ltd.  
Address : 701-702, Block C, Academy Industrialization Multiple-use Building, Shenzhen Virtual University Park, No. 2, Yuexing 3rd Road, Nanshan District, Shenzhen  
Manufacture's name : Shenzhen Chitongda Security Technology Co., Ltd.  
Address : 701-702, Block C, Academy Industrialization Multiple-use Building, Shenzhen Virtual University Park, No. 2, Yuexing 3rd Road, Nanshan District, Shenzhen  
Product name : Smart Door Lock  
Model name : DY001/DY001G/DY002B/DY002BG/DY003B/DY003BG/DY004B/DY004BG/DY005B/DY005BG  
Standards : FCC 1.1310 & §1.1307(b)  
Test Date : Sept.06, 2021 to Sept. 26, 2021  
Date of Issue : Oct. 25, 2021  
Test Result : Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

Leo Yang / Engineer

Technical Manager:

Chris Du / Manager

## RF EXPOSURE EVALUATION

According to FCC 1.1310: 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 §1.1307(b)

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 Exposure</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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

### MPE Calculation Method

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

$G$  = Numeric gain of the antenna relative to isotropic antenna

$\pi$  = 3.1415926

$R$  = distance between observation point and center of the radiator in cm (20cm)

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



## Measurement Result

R=20cm BT:

Peak Power: [2480MHz,  $0.42 \pm 1$ dBm (1.387mW) output power]

Gain:0dBi=1

$P_d = (P_{out} * G) / (4 * \pi * R^2)$

So ,  $P_d = 0.000276$  mW/cm<sup>2</sup>

### Conclusion:

For the max result:  $0.000276 \leq 1.0$ , Compliance with RF Exposure requirement.

----END OF REPORT----