

# TEST REPORT

of

FCC CFR 47 part 1, 1.1307(b), 1.1310

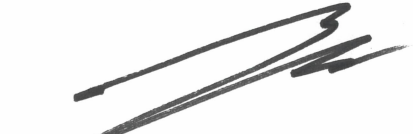
FCC ID: 2ABFG-YRIZW2USTS2

Equipment Under Test : Digital Door Lock  
Model Name : YRD157-ZW-619  
Variant Model Name(s) : Refer to the page 3  
Applicant : iRevo-ASSA ABLOY Korea  
Manufacturer : iRevo-ASSA ABLOY Korea  
Date of Receipt : 2022.06.22  
Date of Test(s) : 2022.06.23 ~ 2022.07.18  
Date of Issue : 2022.08.25

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

- 1) The results of this test report are effective only to the items tested.
  - 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
  - 3) This test report cannot be reproduced, except in full, without prior written permission of the Company.
  - 4) The data marked ※ in this report was provided by the customer and may affect the validity of the test results.
- We are responsible for all the information of this test report except for the data(※) provided by the customer.

Tested by:

  
\_\_\_\_\_  
Murphy Kim

Technical  
Manager:

  
\_\_\_\_\_  
Jinhyoung Cho

**SGS Korea Co., Ltd. Gunpo Laboratory**



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## 1. General Information

### 1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

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### 1.2. Details of Applicant

Applicant : iRevo-ASSA ABLOY Korea  
 Address : 10f of JEI PLATZ Bldg., 186, Gasandigital 1-ro, Geumcheon-gu, Seoul, South Korea, 08502  
 Contact Person : Soo-kyung, Jang  
 Phone No. : +82 2 2107 5741

### 1.3. Details of Manufacturer

Company : Same as applicant  
 Address : Same as applicant

### 1.4. Description of EUT

<b>Kind of Product</b>	Digital Door Lock
<b>Model Name</b>	YRD157-ZW-619
<b>Variant Model Name</b>	YRD157-ZW-605, YRD157-ZW-0BP, YRD157-ZW-BSP
<b>Power Supply</b>	DC 6.0 V
<b>Frequency Range</b>	908.42 MHz ~ 916 MHz
<b>Modulation Technique</b>	FSK
<b>Number of Channels</b>	2 channels
<b>Antenna Type</b>	HELICAL antenna
<b>Antenna Gain</b>	-4.55 dBi
<b>H/W Version</b>	PV01
<b>S/W Version</b>	V2.2.6

### 1.5. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL003327	2022.07.27	Initial
1	F690501-RF-RTL003327-1	2022.08.25	Revised operation mode

### 1.6. Information of Variant Models

Model Name	Description
YRD157-ZW-619	- Basic Model. - SILVER
YRD157-ZW-605	- GOLD
YRD157-ZW-0BP	- Oil Rubbed Bronze
YRD157-ZW-BSP	- Matt BLACK

## 2. RF Exposure Evaluation

### 2.1. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310

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> )	Average Time
(A) Limits for Occupational/Controlled Exposure				
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
(ii) Limits for General Population/Uncontrolled Exposure				
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
<b><u>300-1 500</u></b>	-	-	<b><u>f/1500</u></b>	<b><u>&lt;30</u></b>
1 500-100 000	-	-	1.0	<30

#### 2.1.1. Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

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

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

$P_d$  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 where the MPE limit is reached.

**2.1.2. Test Result of RF Exposure Evaluation**

Test Item : RF Exposure Evaluation Data  
 Test Mode : Normal Operation

**2.1.4. Output Power into Antenna & RF Exposure Evaluation Distance**

**- Maximum tune up tolerance**

Frequency (MHz)	Radiated Field Strength (dB $\mu$ V/m)	Convert Field Strength to E.I.R.P. (dB m)	Power Density at 20 cm (mW/cm <sup>2</sup> )	Limits (mW/cm <sup>2</sup> )
902 ~ 928	89.18	-6.05	0.000 049	0.601 333

**Note;**

- According to KDB 412172, E.I.R.P. = (Filed Strength (V/m) x d (m))<sup>2</sup> / 30, d = measurement distance in meters (m)
- The power density Pd (6th column) at a distance of 20 cm calculated from the friis transmission formula is far below the limit of 1 mW/cm<sup>2</sup>.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- This equipment should be installed and operated with minimum 20 cm between the radiator and your body.
- The antenna gain of this transmitter is less than 6 dBi and must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC.
- According to KDB 447498 D04 Interim General RF Exposure Guidance 2.1.