



Report No.: PTC23102801301E-FC02

FCC TEST REPORT

FCC ID: 2A5CSG100

Product	:	Smart lock
Model Name	:	G100
Serial Model	:	G110, G120, G130, DS100, DS110, DS120, DS130
Brand	:	N/A
Report No.	:	PTC23102801301E-FC02
Prepared for		
Guangdong Yongding Technology Co., Ltd		
NO. 10 Chenglong Road, Qianlong village, Sanxiang Town, Zhongshan City, Guangdong Province		
Prepared by		
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TEST RESULT CERTIFICATION

Applicant's name : Guangdong Yongding Technology Co., Ltd

Address : NO. 10 Chenglong Road, Qianlong village, Sanxiang Town, Zhongshan City, Guangdong Province

Manufacture's name : Guangdong Yongding Technology Co., Ltd

Address : NO. 10 Chenglong Road, Qianlong village, Sanxiang Town, Zhongshan City, Guangdong Province

Product name : Smart lock

Model name : G100, G110, G120, G130, DS100, DS110, DS120, DS130

Test procedure : FCC CFR47 Part 1.1307(b)(1)

Test Date : Nov. 09, 2023 to Nov. 13, 2023

Date of Issue : Nov. 20, 2023

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:

A handwritten signature in black ink, appearing to read 'Jack Zhou'.

Jack Zhou / Engineer

Technical Manager:

A handwritten signature in black ink, appearing to read 'Simon Pu'.

Simon Pu/ Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	15.247 (i)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	Smart lock
Model Number	:	G100
Additional model	:	G110, G120, G130, DS100, DS110, DS120, DS130
Model difference	:	The difference between each model is only the model name and appearance color are different, the other are the same.
Operating frequency	:	2402-2480MHz
Number of Channels	:	40 channels For DTS
Type of Modulation	:	GFSK, For DTS
Antenna installation	:	Ceramic Antenna
Antenna Gain	:	1.75 dBi
Power supply	:	Input: DC 6V
Hardware Version	:	1.0
Software Version	:	2.4



4 RF Exposure

Test Requirement : 15.247 (i)

Evaluation Method : FCC Part 2.1091

4.1 Requirements

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 levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

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



4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$P_d = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
2480	1.50	-7.52	-7.52 ± 1	0.2228	0.000528	1	Pass

*****THE END REPORT*****