RF EXPOSURE EVALUATION REPORT

FCC ID	:	**2AMVI-G2**
Equipment	:	**Gate Smart Lock 2**
Brand Name	:	**Gate**
Model Name	:	**FRDO**
Marketing Name	:	**Gate Smart Lock 2**
Applicant	:	**Gate Labs, Inc. 859 Harrison ST, STE B, San Francisco CA 94107**
Manufacturer	:	**Gate Labs, Inc. 859 Harrison ST, STE B, San Francisco CA 94107**
Standard	:	**47 CFR Part 2.1091**

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Cona Huang

Approved by: Cona Huang / Deputy Manager

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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History of this test report

Report No.	Version	Description	Issued Date
FA190917001	Rev. 01	Initial issue of report	Nov. 08, 2019

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Gate Smart Lock 2
Brand Name	Gate
Model Name	FRDO
Marketing Name	Gate Smart Lock 2
FCC ID	2AMVI-G2
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz
Mode	WLAN: 802.11b/g/n HT20
HW Version	1
SW Version	V2.0.0.0

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Daisy Peng

2. Maximum RF average output power among production units

Average Power(dBm)					
	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
2.4GHz WLAN	802.11b	CH 01	2412 MHz	1Mbps	17
		CH 06	2437 MHz		17
		CH 11	2462 MHz		17
	802.11g	CH 01	2412 MHz	6Mbps	21
		CH 06	2437 MHz		21
		CH 11	2462 MHz		21
	802.11n-HT20	CH 01	2412 MHz	MCS0	20
		CH 06	2437 MHz		20
		CH 11	2462 MHz		20

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	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				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
2.4GHz WLAN	2412.0	4.10	21.00	25.100	0.324	323.594	0.064	1.000

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.