RF Exposure Evaluation Declaration

Product Name	:	Level Lock
Model No.	:	# A1 SHORT /# A2 LONG
FCC ID	:	2ATIO1

Applicant	:	California Things
Address	:	650 Main Street Redwood City, CA 94063

Date of Receipt	:	Apr. 25, 2019
Test Date	:	Apr. 26, 2019~ May. 20, 2019
Issued Date	:	May. 24, 2019
Report No.	:	1942175R-RF-US-P20V01
Report Version	:	V1.0

Test Report Certification

Issued Date : May. 24, 2019
Report No. : 1942175R-RF-US-P20V01

Product Name	:	Level Lock
Applicant	:	California Things
Address	:	650 Main Street Redwood City, CA 94063
Manufacturer	:	California Things
Address	:	650 Main Street Redwood City, CA 94063
Model No.	:	# A1 SHORT /# A2 LONG
FCC ID	:	2ATIO1
EUT Voltage	:	DC 3V
Test Voltage	:	AC 120V/60Hz
Applicable Standard	:	KDB 447498D01V06 FCC Part1.1310
Test Result	:	Complied
Performed Location	:	DEKRA Testing & Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Designation Number: CN1199
Documented By	:	Kitty Li (Adm. Specialist: Kitty Li)
Reviewed By	:	Frank he (Senior Project Manager: Frank He)
Approved By	:	Jack zhang (Engineering Supervisor: Jack Zhang)

1. RF Exposure Evaluation

1.1. Limits

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/cm2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: Pd = (Pout*G)/(4*pi*r2)

Where

Pd = power density in mW/ cm^2

Pout = 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

Pd is the limit of MPE, 1 mW/cm^2 . 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.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18℃and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Level Lock
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

- **Antenna Information:**

Antenna manufacturer	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
	☒	Internal	☐	PIFA		
			☒	PCB		
			☐	Ceramic Chip Antenna		
			☐	Stamping Antenna		
			☐	Metal plate type F antenna		
			☐	Monopole antenna		
Antenna Gain	-6.5dBi					

- **Power Density:**

Test Mode	Frequency Band (MHz)	EIRP (dBm)	Limit of Power Density S(mW/cm^2)	Power Density at R = 20 cm (mW/cm^2)
BT	2400 ~ 2483.5	-4.19	1	0.00008

Note: The maximum power density is 0.00008mW/cm^2 for Level Lock without any other radio equipment.

The End