Compliance Testing, LLC
Previously Flom Test Lab
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.ComplianceTesting.com
info@ComplianceTesting.com

Test Report

Prepared for: Haven Lock Inc.

Model: HL2-FOB-001

Description: Bluetooth Connected Smart Lock Key Fob

Serial Number: N/A

FCC ID: 2ARFQHL2FOB001

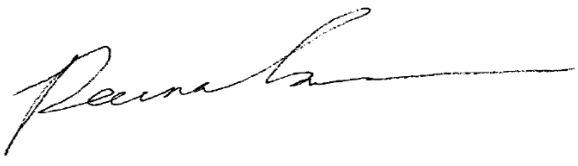
To

FCC Part 1.1310

Date of Issue: November 8, 2018

On the behalf of the applicant:	**Haven Lock Inc.** **188 Front Street** **Franklin, TN 37064**
Attention of:	**Alex Bertelli, CEO Founder** **Ph: (615)478-4331** **Email: alex@havenlock.com**

Prepared By
Compliance Testing, LLC
1724 S. Nevada Way
Mesa, AZ 85204
(480) 926-3100 phone / (480) 926-3598 fax
www.compliancetesting.com
Project No: p1880030



Poona Saber
Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	October 31, 2018	Poona Saber	Original Document

ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)

The tests results contained within this test report all fall within our scope of accreditation, unless below

Please refer to http://www.compliancetesting.com/labscope.html for current scope of accreditation.

Testing Certificate Number: **2152.01**

FCC Site Reg. #349717

IC Site Reg. #2044A-2

Non-accredited tests contained in this report:

N/A

EUT Description
Model: HL2-FOB-001
Description: Bluetooth Connected Smart Lock Key Fob
Firmware: N/A
Software: N/A
Serial Number: N/A
Additional Information:
EUT is a battery operated key Fob using BLE technology to connect with Haven lock product at the frequency range of 2402-2480 MHz. The HFY board inside of the FOB is tested at low, mid and high frequencies and controlled through an interface UART PCB board plus a Jlink debugger with adapter to control the channels and power setting.

EUT Operation during Tests
EUT is put at modulated continuous transmit mode at low, mid and high channels. It has a SMA connector to facilitate conducted testing. The highest gain of the Chip Antenna on the board is 2.5 dBi.

Source Based Time Averaged Power Calculation

Average Power calculations

Average Power = Peak Power * duty-cycle%

Tuned Frequency (MHz)	Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
2402	3.24	100	mW

This is for calculating a SAR exclusion per KDB 447498.

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [√$f_{(GHz)}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[25] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[26]
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

3.24/5 * (√2.4) =1.55 <3

END OF TEST REPORT