# Report on the Testing of the

iKeyless LLC HNSSL-G070

## FCC ID: X32-HNSSLG070

In accordance with: FCC Rule Part: 47 CFR Part 2.1091

### **RF Exposure Certification Exhibit**

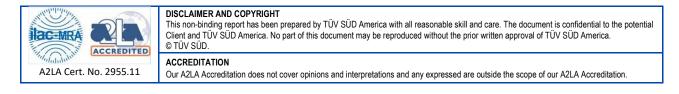
Prepared for: iKeyless LLC 12101 Sycamore Station PI. Ste 140 Louisville, KY 40299

## COMMERCIAL-IN-CONFIDENCE

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| SIGNATURE   |                            |  |                       |                 |
|---|----------------------------|--|-----------------------|-----------------|
| NAME  | JOB TITLE                  |  | RESPONSIBLE FOR       | ISSUE DATE      |
| Sean Sellergren   | Sr. EMC Engineer           |  | Authorized Signatory  | 09 August 2022  |
| Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD America, Inc. document control rules. |                            |  |                       |                 |
| FCC Accreditation Innovation, Science, and Economic Development Canada Accreditation  |                            |  |                       |                 |
| Laboratory  |                            |  | 512A New Brighton, MN | Test Laboratory |
| EXECUTIVE SUMMARY   |                            |  | •                     | · · ·           |
| EXECUTIVE SUMMARY   | uct was tested and found t |  | <b>v</b> ,            |                 |



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#### 1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

#### Table 1.1-1 – Modification Record

| Issue | Description of Change | Date of Issue |
|-------|-----------------------|---------------|
| 1     | First Issue           | 12 AUG 2022   |

#### **General Information:**

| Applicant: | iKeyless LLC  |
|------------|---------------|
| FCC ID:    | X32-HNSSLG070 |

#### **Exposure Conditions:**

| Frequency:       | 313.55 – 314.15 MHz; 433.66 – 434.18 MHz                         |
|------------------|--|
| Antenna Type:    | PCB Trace  |
| Antenna Gain:    | 313.55 – 314.15 MHz: -13.90 dBi; 433.66 – 434.18 MHz: -10.22 dBi |
| Simultaneous TX: | No   |
| Modality:        | Portable   |
| Separation:      | ≥ 5 mm   |
| Environment:     | General Public/Uncontrolled Exposure                             |
| FCC Evaluation:  | Assessed to "1-g Body" exposure conditions                       |



### **RF Exposure Calculation – FCC**

313.55 – 314.15 MHz Variant = "Device 1" 433.66 – 434.18 MHz Variant = "Device 2"

| Device Characteristics:                                   |          |          |
|---|----------|----------|
| Technical Parameters                                      | Device 1 | Device 2 |
| Frequency (GHz)   | 0.31415  | 0.43418  |
| Frequency (MHz)   | 314.15   | 434.18   |
| Separation Distance (cm)                                  | 0.50     | 0.50     |
| Separation Distance (m)                                   | 0.0050   | 0.0050   |
| Antenna Gain (dBi)  | -13.90   | -10.22   |
| ERP Easily Determined                                     | YES      | YES      |
| 1-g body or 10-g extremity                                | Body     | Body     |
| Conducted Power (dBm)                                     | 11.35    | 8.66     |
| Conducted Power (mW)                                      | 13.65    | 7.35     |
| Duty Factor (Source-Based) %                              | 100.0    | 100.0    |
| Maximum (Source-Based) Time-Averaged Conducted Power (mW) | 13.65    | 7.35     |
| Maximum (Source-Based) Time-Averaged ERP (mW)             | 0.34     | 0.43     |
| Maximum (Source-Based) Time-Averaged EIRP (mW)            | 0.56     | 0.70     |
| Maximum Output (mW)                                       | 13.65    | 7.35     |

| 47 CFR 1.1307(b)(3)<br>SAR-Based Exemp<br>P <sub>th</sub> (mW) |          |          |
|--|----------|----------|
| Technical Parameters   | Device 1 | Device 2 |
| x  | 0.78     | 0.99     |
| ERP <sub>20cm</sub> (mW)                                       | 640.87   | 885.73   |
| Maximum Output (mW)  | 13.646   | 7.345    |
| P <sub>th</sub> (mW)   | 36.448   | 23.147   |
| Exemption  | YES      | YES      |
| Contribution Ratio (P / Pth)                                   | 0.374    | 0.317    |
| Distance to Limit (cm)   | 0.141    | 0.156    |