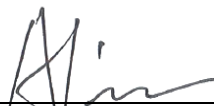


# RF EVALUATION TEST REPORT

Applicant..... : Chongqing Pinsheng Technology Co., Ltd.  
Address..... : 7Floor, No.5 middle Huangshan Avenue, North New Zone, Chongqing China.  
Manufacturer..... : Chongqing Pinsheng Technology Co., Ltd.  
Address..... : 7Floor, No.5 middle Huangshan Avenue, North New Zone, Chongqing China.  
Factory ..... : Chongqing Pinsheng Technology Co., Ltd. DaTiejia branch office  
Address ..... : NO.368, BOE Avenue, Beibei District, Chongqing China.  
Product Name..... : Label Printer  
Brand Name..... : MakeID  
Model No. .... : L1-A, L1-B, L1-C, L1-D, L1-E, L1-F, L1-G, L1-H, L1-I, L1-J, L1, L2, L3, L4, L5,  
L6, L7, L8, L9, L10 (For model difference refer to section 2)  
FCC ID..... : 2BLKN-L1  
Measurement Standard..... : 47 CFR PART 2, Section 2.1093 & 1.1310  
Receipt Date of Samples.... : February 13, 2025  
Date of Tested..... : February 19, 2025 to March 17, 2025  
Date of Report..... : March 21, 2025

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.



Prepared by

Alina Guo / Project Engineer



Approved by

Iori Fan / Authorized Signatory

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## 1. General Description of EUT

| Product Information     |                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:           | Label Printer                                                                                                                                          |
| Main Model Name:        | L1-A                                                                                                                                                   |
| Additional Model Name:  | L1-B, L1-C, L1-D, L1-E, L1-F, L1-G, L1-H, L1-I, L1-J, L1, L2, L3, L4, L5, L6, L7, L8, L9, L10                                                          |
| Model Difference:       | These models have the same circuit schematic, construction, PCB Layout and critical components. The difference is model number due to trading purpose. |
| S/N:                    | L1C24K00022                                                                                                                                            |
| Brand Name:             | MakeID                                                                                                                                                 |
| Hardware Version:       | V1.0                                                                                                                                                   |
| Software Version:       | 2.0.1                                                                                                                                                  |
| Rating:                 | DC 5V come from USB port<br>DC 3.7V come from internal Li-ion battery                                                                                  |
| Typical Arrangement:    | Table-top                                                                                                                                              |
| I/O Port:               | Refer to the user manual                                                                                                                               |
| Accessories Information |                                                                                                                                                        |
| Adapter:                | N/A                                                                                                                                                    |
| Cable:                  | N/A                                                                                                                                                    |
| Other:                  | N/A                                                                                                                                                    |
| Additional Information  |                                                                                                                                                        |
| Note:                   | According to these model differences, all tests were performed on model L1-A.                                                                          |
| Remark:                 | All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.                         |

| Technical Specification (BLE)  |                                                  |
|--------------------------------|--------------------------------------------------|
| Bluetooth Version:             | V5.0                                             |
| Frequency Range:               | 2402-2480MHz                                     |
| Modulation Type:               | GFSK                                             |
| Number of Channel:             | 40 (refer to following channel list for details) |
| Channel Space:                 | 2MHz                                             |
| Antenna Type:                  | PCB antenna*1                                    |
| Antenna Gain:                  | 0.93 dBi (Declared by the manufacturer)          |
| RF PHY Support:                | 1Mbps, 2Mbps                                     |
| Technical Specification (RFID) |                                                  |
| Declaring the Frequency:       | 13.56MHz                                         |
| Modulation Type:               | ASK                                              |
| Antenna Type:                  | PIFA antenna*1                                   |
| Antenna Gain:                  | 0 dBi (Declared by manufacturer)                 |
| Number of Channels:            | 1                                                |

## 2. Test Facility and Location

|                                   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site                         | : | Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Accreditations and Authorizations | : | <p>The Laboratory has been assessed and proved to be in compliance with CNAS/CL01</p> <p>Listed by CNAS, August 13, 2018</p> <p>The Certificate Registration Number is L5795.</p> <p>The Certificate is valid until August 13, 2030</p><br><p>The Laboratory has been assessed and proved to be in compliance with ISO17025</p> <p>Listed by A2LA, November 01, 2017</p> <p>The Certificate Registration Number is 4429.01</p> <p>The Certificate is valid until December 31, 2025</p><br><p>Listed by FCC, November 06, 2017</p> <p>Test Firm Registration Number: 907417</p><br><p>Listed by Industry Canada, June 08, 2017</p> <p>The Certificate Registration Number. Is 46405-9743A</p> |
| Test Site Location                | : | Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### **3. Applicable Standards and References**

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

**Test Standards:**

47 CFR Part 1, 1.1307

47 CFR Part 2, 2.1093 & 1.1310

KDB 447498 D01 v06

## 4. Maximum Permissible Exposure Limit

### § 1.1310 Radiofrequency radiation exposure limits.

(a) Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in [§ 1.1307\(b\) of this part](#) within the frequency range of 100 kHz to 6 GHz (inclusive).

(b) The SAR limits for occupational/controlled exposure are 0.4 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 8 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit for occupational/controlled exposure is 20 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 6 minutes to determine compliance with occupational/controlled SAR limits.

(c) The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

(d) (1) Evaluation with respect to the SAR limits in this section must demonstrate compliance with both the whole-body and peak spatial-average limits using technically supported measurement or computational methods and exposure conditions in advance of authorization (licensing or equipment certification) and in a manner that facilitates independent assessment and, if appropriate, enforcement. Numerical computation of SAR must be supported by adequate documentation showing that the numerical method as implemented in the computational software has been fully validated; in addition, the equipment under test and exposure conditions must be modeled according to protocols established by FCC-accepted numerical computation standards or available FCC procedures for the specific computational method.

(2) For operations within the frequency range of 300 kHz and 6 GHz (inclusive), the limits for maximum permissible exposure (MPE), derived from whole-body SAR limits and listed in Table 1 in [paragraph \(e\)\(1\) of this section](#), may be used instead of whole-body SAR limits as set forth in [paragraphs \(a\) through \(c\) of this section](#) to evaluate the environmental impact of human exposure to RF radiation as specified in [§ 1.1307\(b\) of this part](#), except for portable devices as defined in [§ 2.1093 of this chapter](#) as these evaluations shall be performed according to the SAR provisions in [§ 2.1093](#).



(3) At operating frequencies above 6 GHz, the MPE limits listed in Table 1 in [paragraph \(e\)\(1\)](#) of this section shall be used in all cases to evaluate the environmental impact of human exposure to RF radiation as specified in [§ 1.1307\(b\) of this part](#).

(4) Both the MPE limits listed in Table 1 in [paragraph \(e\)\(1\)](#) of this section and the SAR limits as set forth in [paragraphs \(a\)](#) through [\(c\)](#) of this section are for continuous exposure, that is, for indefinite time periods. Exposure levels higher than the limits are permitted for shorter exposure times, as long as the average exposure over a period not more than the specified averaging time in Table 1 in paragraph (e)(1) is less than (or equal to) the exposure limits. Detailed information on our policies regarding procedures for evaluating compliance with all of these exposure limits can be found in the most recent edition of FCC's *OET Bulletin 65*, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields," and its supplements, all available at the FCC's internet website: <https://www.fcc.gov/general/oet-bulletins-line>, and in the Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB)

(e)(1) Table 1 to [§ 1.1310\(e\)\(1\)](#) sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1 to [§ 1.1310\(e\)\(1\)](#)—Limits for Maximum Permissible Exposure (MPE)

| Frequency range (MHz)                                                      | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(i) Limits for Occupational/Controlled Exposure</b>                     |                               |                               |                                     |                          |
| 0.3–3.0                                                                    | 614                           | 1.63                          | *(100)                              | ≤6                       |
| 3.0–30                                                                     | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | <6                       |
| 30–300                                                                     | 61.4                          | 0.163                         | 1.0                                 | <6                       |
| 300–1,500                                                                  | -                             | -                             | f/300                               | <6                       |
| 1,500–100,000                                                              | -                             | -                             | 5                                   | <6                       |
| <b>(ii) Limits for General Population/Uncontrolled Exposure</b>            |                               |                               |                                     |                          |
| 0.3–1.34                                                                   | 614                           | 1.63                          | *(100)                              | <30                      |
| 1.34–30                                                                    | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | <30                      |
| 30–300                                                                     | 27.5                          | 0.073                         | 0.2                                 | <30                      |
| 300–1,500                                                                  | -                             | -                             | f/1500                              | <30                      |
| 1,500–100,000                                                              | -                             | -                             | 1.0                                 | <30                      |
| Note:<br>f = frequency in MHz.<br>* = Plane-wave equivalent power density. |                               |                               |                                     |                          |

Power density (S) is calculated by the following formula:

$$S = (P * G) / 4\pi R^2$$

Where, S = Power density (W/m<sup>2</sup>)

P = Output power to antenna (W)

R = Distance between radiating structure and observation point (m)

R = 0.2cm

G = Gain of antenna in numeric

$\pi = 3.1416$

### Portable Device

According to §15.247(i) and §1.1307b(1), 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 of the Commission's guidelines. See KDB 447498 D01 General RF Exposure Guidance v06, section 4.3.1.

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

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

· f(GHz) is the RF channel transmit frequency in GHz

· Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

· The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

For 100 MHz to 6 GHz and test separation distances  $> 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$  mW, for 100 MHz to 1500 MHz

2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $> 1500$  MHz and  $\leq 6$  GHz

c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

1) For test separation distances  $> 50$  mm and  $< 200$  mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$

2) For test separation distances  $\leq 50$  mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by 1/2.

3) SAR measurement procedures are not established below 100 MHz.

When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any SAR test results below 100 MHz to be acceptable.

## 5. RF Exposure Evaluation Results

### For NFC:

| Single RF Source |                 |                         |                         |                        |                      |
|------------------|-----------------|-------------------------|-------------------------|------------------------|----------------------|
| Mode             | Frequency (MHz) | Field strength (dBuV/m) | Max. Output Power (dBm) | Max. Output Power (mW) | Threshold Value (mW) |
| ASK              | 13.56           | 38.70                   | -56.56                  | 2.21e-6                | 442.97               |

### For Bluetooth:

| Channel      | Channel Frequency (MHz) | Max Output power (dBm) | Max Output power (mW) | Calculation Value (Note 1) | Threshold Value |
|--------------|-------------------------|------------------------|-----------------------|----------------------------|-----------------|
| GFSK (1Mbps) |                         |                        |                       |                            |                 |
| Low          | 2402                    | 1.334                  | 1.36                  | 0.4216                     | 3.0             |
| Middle       | 2440                    | 2.336                  | 1.71                  | 0.5342                     | 3.0             |
| High         | 2480                    | -0.133                 | 0.97                  | 0.3055                     | 3.0             |
| GFSK (2Mbps) |                         |                        |                       |                            |                 |
| Low          | 2402                    | 2.021                  | 1.59                  | 0.4928                     | 3.0             |
| Middle       | 2440                    | 2.033                  | 1.60                  | 0.4999                     | 3.0             |
| High         | 2480                    | -0.272                 | 0.94                  | 0.2961                     | 3.0             |

Note: Calculation Value =[(max. power of channel, mW)/(min. test separation distance, mm)] · [√f(GHz)].

For example:  $1.71/5 \cdot \sqrt{2.440} = 0.5342 \leq 3.0$

| Multiple RF Source<br>(Simultaneous Transmission) |                   |             |       |
|---------------------------------------------------|-------------------|-------------|-------|
| NFC Ratio                                         | Bluetooth (Ratio) | Total Ratio | Limit |
| 4.98e-9                                           | 0.178067          | 0.178067    | 1.0   |

### Conclusion:

According to 47 CFR §1.1310 (b)(c)(d)(e)(1) and KDB447498 D01 V06, the RF exposure analysis concludes that the product is compliant with the FCC RF exposure requirements in portable environment without distance restrictions.

---End---