**Shenzhen Huaxia Testing Technology Co., Ltd**

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V04
Report Template Revision Date: 2018-07-06

# RF Exposure Evaluation Report

| | |
|---|---|
| **Report No.:** | CQASZ20210600883E-03 |
| **Applicant:** | XIAMEN LIYIN TECHNOLOGY CO., LTD |
| **Address of Applicant:** | 2F, NO.9, Tianyang Road Jimei, Xiamen, Fujian, China |
| **Equipment Under Test (EUT):** | |
| **EUT Name:** | Mini Pocket Printer |
| **Model No.:** | MP100, MP100S, MP300, MP300S, Q1, Q2, Q3, M1, M2, M3, P100, P100S, P200, P200S, P300, P300S, P8, P8S |
| **Test Model No.:** | MP100 |
| **Brand Name:** | N/A |
| **FCC ID:** | 2A2GELY1902-01 |
| **Standards:** | 47 CFR Part 1.1307<br>47 CFR Part 2.1093<br>KDB447498D01 General RF Exposure Guidance v06 |
| **Date of Receipt:** | 2021-06-22 |
| **Date of Test:** | 2021-06-22 to 2021-07-02 |
| **Date of Issue:** | 2021-07-02 |
| **Test Result:** | **PASS*** |

***In the configuration tested, the EUT complied with the standards specified above**

***Tested By:*** lewis zhou

***(Lewis Zhou)***

***Reviewed By:*** Rock Huang

***(Rock Huang)***

***Approved By:***

***(Jack Ai)***

# 1 Version

**Revision History Of Report**

| Report No. | Version | Description | Issue Date |
|---|---|---|---|
| CQASZ20210600883E-03 | Rev.01 | Initial report | 2021-07-02 |

# 2 Contents

# 3 General Information

## 3.1 Client Information

| | |
|---|---|
| Applicant: | XIAMEN LIYIN TECHNOLOGY CO., LTD |
| Address of Applicant: | 2F, NO.9, Tianyang Road Jimei, Xiamen, Fujian, China |
| Manufacturer: | XIAMEN LIYIN TECHNOLOGY CO., LTD |
| Address of Manufacturer: | 2F, NO.9, Tianyang Road Jimei, Xiamen, Fujian, China |
| Factory: | XIAMEN LIYIN TECHNOLOGY CO., LTD |
| Address of Factory: | 2F, NO.9, Tianyang Road Jimei, Xiamen, Fujian, China |

## 3.2 General Description of EUT

| | |
|---|---|
| Product Name: | Mini Pocket Printer |
| Model No.: | MP100, MP100S, MP300, MP300S, Q1, Q2, Q3, M1, M2, M3, P100, P100S, P200, P200S, P300, P300S, P8, P8S |
| Test Model No.: | MP100 |
| Trade Mark: | N/A |
| Hardware Version: | V2.0 |
| Software Version: | P100_YC3121_NoSSFlash_200DPI.bin |
| Power Supply: | lithium battery:<br>DC3.7V, 1000mAh, Charge by DC5.0V |

## 3.3 General Description of BT

| | |
|---|---|
| Operation Frequency: | 2402MHz~2480MHz |
| Modulation Technique: | Frequency Hopping Spread Spectrum(FHSS) |
| Modulation Type: | GFSK, π/4DQPSK, 8DPSK mode |
| Transfer Rate: | 1Mbps/2Mbps/3Mbps |
| Number of Channel: | 79 |
| Hopping Channel Type: | Adaptive Frequency Hopping systems |
| Product Type: | ☐ Mobile ☒ Portable ☐ Fix Location |
| Antenna Type: | PCB antenna |
| Antenna Gain: | 2.58dBi |

## 3.4 General Description of BLE

| | |
|---|---|
| Operation Frequency: | 2402MHz~2480MHz |
| Modulation Type: | GFSK |
| Transfer Rate: | 1Mbps |
| Number of Channel: | 40 |
| Product Type: | ☐ Mobile ☒ Portable ☐ Fix Location |
| Antenna Type: | PCB antenna |
| Antenna Gain: | 2.58dBi |

Note:

Model No.: MP100, MP100S, MP300, MP300S, Q1, Q2, Q3, M1, M2, M3, P100, P100S, P200, P200S, P300, P300S, P8, P8S

Only the model MP100 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color of appearance and model name.

# 4 SAR Evaluation

## 4.1 RF Exposure Compliance Requirement

### 4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

### 4.1.2 Limits

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, where

f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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

### 4.1.3 EUT RF Exposure

**1) For BT**

**Measurement Data**

| GFSK mode | | | | |
|---|---|---|---|---|
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power | |
| | | | (dBm) | (mW) |
| Lowest(2402MHz) | -4.010 | -5.0±1 | -4.0 | 0.398 |
| Middle(2441MHz) | -3.320 | -4±1 | -3 | 0.501 |
| Highest(2480MHz) | -2.740 | -3.5±1 | -2.5 | 0.562 |
| π/4DQPSK mode | | | | |
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power | |
| | | | (dBm) | (mW) |
| Lowest(2402MHz) | -3.260 | -4±1 | -3.0 | 0.501 |
| Middle(2441MHz) | -2.530 | -3.5±1 | -2.5 | 0.562 |
| Highest(2480MHz) | -2.030 | -3±1 | -2.0 | 0.631 |
| 8DPSK mode | | | | |
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power | |
| | | | (dBm) | (mW) |
| Lowest(2402MHz) | -2.920 | -3.5±1 | -2.5 | 0.562 |
| Middle(2441MHz) | -2.190 | -3.0±1 | -2.0 | 0.631 |
| Highest(2480MHz) | -1.610 | -2.5±1 | -1.5 | 0.708 |

| Worst case: 8DPSK mode | | | | | | |
|---|---|---|---|---|---|---|
| Channel | Maximum Peak Conducted Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power | | Calculated value | Exclusion threshold |
| | | | (dBm) | (mW) | | |
| Lowest (2402MHz) | -2.920 | -3.5±1 | -2.5 | 0.562 | 0.174 | 3.0 |
| Middle (2441MHz) | -2.190 | -3.0±1 | -2.0 | 0.631 | 0.197 | |
| Highest (2480MHz) | -1.610 | -2.5±1 | -1.5 | 0.708 | 0.223 | |
| Conclusion: the calculated value ≤3.0, SAR is exempted. | | | | | | |

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20210600883E-01

**2) For BLE**

**Measurement Data**

| GFSK mode | | | | |
|---|---|---|---|---|
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power | |
| | | | (dBm) | (mW) |
| Lowest(2402MHz) | 0.03 | -0.5±1 | 0.5 | 1.122 |
| Middle(2440MHz) | 0.66 | -0±1 | 1.0 | 1.259 |
| Highest(2480MHz) | 0.42 | -0.5±1 | 0.5 | 1.122 |

| Worst case: GFSK mode | | | | | | |
|---|---|---|---|---|---|---|
| Channel | Maximum Peak Conducted Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power | | Calculated value | Exclusion threshold |
| | | | (dBm) | (mW) | | |
| Lowest (2402MHz) | 0.03 | -0.5±1 | 0.5 | 1.122 | 0.348 | 3.0 |
| Middle (2440MHz) | 0.66 | -0±1 | 1.0 | 1.259 | 0.393 | |
| Highest (2480MHz) | 0.42 | -0.5±1 | 0.5 | 1.122 | 0.353 | |
| Conclusion: the calculated value ≤3.0, SAR is exempted. | | | | | | |

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20210600883E-02
BDR and BLE can not simultaneous transmitting at same time.