

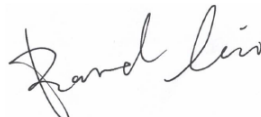
## RF EXPOSURE REPORT

For

### Signify (China) Investment Co., Ltd.

Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai 200233, China

**FCC ID: 2AGBWSHM2**

|                                        |                                                                                                                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Type:</b><br>Original Report | <b>Product Name:</b><br>Sensor                                                                                                                                                                                              |
| <b>Report Number:</b>                  | RKSB240205001-00C                                                                                                                                                                                                           |
| <b>Report Date:</b>                    | 2024-06-28                                                                                                                                                                                                                  |
| <b>Reviewed By:</b>                    | Bard Liu                                                                                                                               |
| <b>Approves By:</b>                    | Kyle Xu                                                                                                                                |
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

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REPORT REVISION HISTORY

| Number of Revisions | Report No.        | Version | Issue Date | Description     |
|---------------------|-------------------|---------|------------|-----------------|
| 0                   | RKSB240205001-00C | R1V1    | 2024-06-28 | Initial Release |

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

|                            |                                                                      |
|----------------------------|----------------------------------------------------------------------|
| Applicant:                 | Signify (China) Investment Co., Ltd.                                 |
| Tested Model:              | EasySense SNH212 MC                                                  |
| Product Name:              | Sensor                                                               |
| Power Supply:              | DC 12-22V                                                            |
| RF Function:               | BLE; Zigbee                                                          |
| Maximum Output Power:      | BLE (1 Mbps): 2.08 dBm<br>BLE (2 Mbps): 2.15 dBm<br>Zigbee: 5.50 dBm |
| Operating Band /Frequency: | BLE: 2402-2480 MHz<br>Zigbee: 2405-2480 MHz                          |
| Modulation Type:           | BLE: GFSK<br>Zigbee: O-QPSK                                          |
| Channel Number:            | BLE: 40<br>Zigbee: 16                                                |
| Antenna Type:              | BLE/Zigbee: PCB Antenna                                              |
| ★Maximum Antenna Gain:     | BLE/Zigbee: 2.2 dBi                                                  |

*Note: The maximum antenna gain is provided by the applicant.*

*All measurement and test data in this report was gathered from production sample serial number: RKSB240205001-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2024-02-05.)*

## **FCC §1.1310 & §2.1091 –MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

### **Applicable Standard**

According to subpart §2.1091 and subpart §1.1310, 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 level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                                      |                                      |                                          |                                 |
|----------------------------------------------------------------|--------------------------------------|--------------------------------------|------------------------------------------|---------------------------------|
| <b>Frequency Range (MHz)</b>                                   | <b>Electric Field Strength (V/m)</b> | <b>Magnetic Field Strength (A/m)</b> | <b>Power Density (mW/cm<sup>2</sup>)</b> | <b>Averaging Time (minutes)</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                              |
| 300-1500                                                       | /                                    | /                                    | f/1500                                   | 30                              |
| 1500-100,000                                                   | /                                    | /                                    | 1.0                                      | 30                              |

f = frequency in MHz; \* = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

### **Calculated Formulary**

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

**Calculated Data:**

| Mode   | Frequency Range (MHz) | Antenna Gain |           | ★Tune-up Output Power |      | Evaluation Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) |
|--------|-----------------------|--------------|-----------|-----------------------|------|--------------------------|-------------------------------------|---------------------------------|
|        |                       | (dBi)        | (numeric) | (dBm)                 | (mW) |                          |                                     |                                 |
| BLE    | 2402~2480             | 2.2          | 1.66      | 2.5                   | 1.78 | 20                       | 0.0006                              | 1.0                             |
| Zigbee | 2405~2480             | 2.2          | 1.66      | 6.0                   | 3.98 | 20                       | 0.0013                              | 1.0                             |

**Note:**

1. For the above tune up power were declared by the manufacturer.
2. Zigbee and BLE cannot transmit simultaneously.

**Result:** The device meet FCC MPE at 20 cm distance.

## **EUT PHOTOGRAPHS**

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Please refer to the attachment EXHIBIT A - EUT EXTERNAL and EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.

### **Declarations**

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor  $k=2$  with the 95.45% confidence interval.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***