

## RF Exposure Evaluation Report

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Report No.: SRTC2020-9004(F)-20072801(I)

Product Name: Notification Pager Transmitter

Product Model: P0004930100T

Applicant: SoftBank Robotics Corp.

Manufacturer: SoftBank Robotics Corp.

Specification: FCC Part §2.1091, §2.1093, §1.1307(b), §1.1310

FCC ID: 2ATI9- P000493010T

The State Radio\_monitoring\_center Testing Center (SRTC)

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## **1 GENERAL INFORMATION**

### **1.1 Notes of the test report**

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The test results relate only to individual items of the samples which have been tested.

The certification and accreditation identifiers used in this report shall not be applicable to the tested or calibrated samples thereof. The manufacturer shall not mark the tested samples or items (or a separate part of the item) with the identifiers of certification and accreditation to mislead relevant parties about the tested samples or items.

### **1.2 Information about the testing laboratory**

|                    |  |
|--------------------|--|
| Company:           | The State Radio_monitoring_center Testing Center (SRTC)              |
| Address:           | 15th Building, No.30 Shixing Street, Shijingshan District, P.R.China |
| City:              | Beijing  |
| Country or Region: | P.R.China  |
| Contacted person:  | Liu Jia  |
| Tel:               | +86 10 57996183  |
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| Email:             | liujiaf@srtc.org.cn  |

### **1.3 Applicant's details**

|                    |   |
|--------------------|---|
| Company:           | SoftBank Robotics Corp.                   |
| Address:           | 1-9-2 Higashi-shimbashi, Minato-ku, Tokyo |
| City:              | Tokyo                                     |
| Country or Region: | Japan                                     |
| Contacted person:  | Huijun Wang                               |
| Tel:               | +81-3-6889-2450                           |
| Fax:               | ---                                       |
| Email:             | huijun.wang@g.softbank.co.jp              |

### **1.4 Manufacturer's details**

|                    |   |
|--------------------|---|
| Company:           | SoftBank Robotics Corp.                   |
| Address:           | 1-9-2 Higashi-shimbashi, Minato-ku, Tokyo |
| City:              | Tokyo                                     |
| Country or Region: | Japan                                     |
| Contacted person:  | Huijun Wang                               |
| Tel:               | +81-3-6889-2450                           |
| Fax:               | ---                                       |
| Email:             | huijun.wang@g.softbank.co.jp              |

## 1.5 Test Environment

|   |            |
|---|------------|
| Date of Receipt of test sample at SRTC: | 2020.07.28 |
| Testing Start Date:                     | 2020.07.28 |
| Testing End Date:                       | 2020.08.11 |

| Environmental Data: | Temperature (°C) | Humidity (%) |
|---------------------|------------------|--------------|
| Ambient             | 25               | 30           |

|                                 |     |
|---------------------------------|-----|
| Normal Supply Voltage (V d.c.): | 5.0 |
|---------------------------------|-----|

## 2 DESCRIPTION OF THE DEVICE UNDER TEST

### 2.1 Final Equipment Build Status

|                   |                    |
|-------------------|--------------------|
| Frequency Range   | 902~928MHz         |
| Number of Channel | 51                 |
| Modulation Type   | FSK                |
| Power Supply      | Charger            |
| HW Version        | V1.1.0             |
| SW Version        | 1.1                |
| SN                | 7240114X1A70000059 |
| Antenna type      | Refer to Note      |
| Antenna connector | Refer to Note      |

**Note:**

The antenna provides to the EUT, please refer to the following table:

| Brand | Model | Antenna gain | Frequency range (GHz) | Antenna type   | Connecter Type |
|-------|-------|--------------|-----------------------|----------------|----------------|
| N/A   | N/A   | -1.29dBi     | 902MHz~928MHz         | Spring antenna | N/A            |

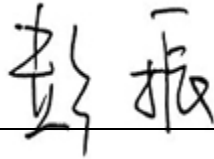

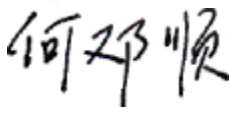
Manufacturers ensure that their designs will not be modified by the user or third party's arbitrary antenna parameters and performance.

### **3 REFERENCE SPECIFICATION**

| Specification | Version          | Title   |
|---------------|------------------|---|
| 2.1091        | Sept. 20, 2017   | Radiofrequency radiation exposure evaluation: mobile devices.   |
| 2.1093        | Sept. 20, 2017   | Radiofrequency radiation exposure evaluation: portable devices.   |
| 1.1307(b)     | Apr. 22, 1986    | Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared. |
| 1.1310        | June 4, 2013     | Radiofrequency radiation exposure limits.   |
| KDB447498     | October 23, 2015 | RF exposure procedures and equipment authorization policies for mobile and portable devices                           |

**4 RESULT SUMMARY**

| No. | Test case                          | FCC reference   |
|-----|------------------------------------|---|
| 1   | RF Exposure Evaluation Calculation | FCC Part §2.1091,<br>FCC Part §2.1093,<br>FCC Part §1.1307(b)<br>FCC Part §1.1310<br>KDB 447498 |

|  |   |
|--|---|
| This Test Report Is Issued by:<br>Mr. Peng Zhen<br> | Checked by:<br>Mr. Li Bin<br> |
| Tested by:<br>Mr. He Dengshun<br>                   | Issued date:<br><br>20200917  |

## 5 Test Results

### 5.1 Average Power Test Result

| Carrier frequency (MHz) | Channel No. | Average Power Output (dBm) | Max tune-up tolerance, (dBm) |
|-------------------------|-------------|----------------------------|------------------------------|
| 902.5                   | Low         | 12.56                      | 13.00                        |
| 915.0                   | Middle      | 12.40                      | 13.00                        |
| 927.5                   | High        | 12.27                      | 13.00                        |

### 5.2 RF Exposure Evaluation Calculation

According to the KDB447498 4.3.1(a)

For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- 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 according to 4.1 f) is applied to determine SAR test exclusion.

Summary of Transmitters

| Mode/Band | Freq (MHz) | Max. power of channel, including tune-up tolerance, (dBm) | Max. power of channel, including tune-up tolerance, (mW) | Min. test separation distance, (mm) | The calculation results (1g) | SAR test exclusion Threshold (1g) | SAR Required |
|-----------|------------|---|--|-------------------------------------|------------------------------|-----------------------------------|--------------|
| Lora      | 902.5      | 13.00   | 19.953   | 50                                  | 0.420                        | $\leq 3.0$                        | No           |
| Lora      | 915.0      | 13.00   | 19.953   | 50                                  | 0.417                        | $\leq 3.0$                        | No           |
| Lora      | 927.5      | 13.00   | 19.953   | 50                                  | 0.414                        | $\leq 3.0$                        | No           |

---End of Test Report---