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# TEST REPORT

FCC MPE Test for L-RA1
Certification

**APPLICANT**
RACOS SYSTEM Co., Ltd

**REPORT NO.**
HCT-RF-2112-FI002

**DATE OF ISSUE**
December 9, 2021

**Tested by**
Jin Gwan Lee

**Technical Manager**
Jong Seok Lee

Accredited by KOLAS, Republic of KOREA

HCT CO., LTD.
BongJai Huh / CEO

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# TEST REPORT

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**HCT-RF-2112-FI002**

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Additional Model
-

| | |
|---|---|
| Applicant | **RACOS SYSTEM Co., Ltd**<br>Eden B/D 2F, 32, Cheonggu-ro 6-gil, Jung-gu, Seoul, Korea (04586) |
| Eut Type<br>Model Name | BLE Automatic door control module<br>L-RA1 |
| FCC ID | 2A3F7-L-RA1 |
| Frequency range | 2 402 MHz – 2 480 MHz (Bluetooth) |

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

## REVISION HISTORY

The revision history for this test report is shown in table.

| Revision No. | Date of Issue | Description |
|---|---|---|
| 0 | December 09, 2021 | Initial Release |

Engineering Statement:
The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance

KOLAS Statement:
The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (KOLAS Accreditation No. KT197)

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

## RF Exposure Statement

### 1. Limit

**According to § 1.1310, § 2.1091 RF exposure is calculated.**

(B) Limits for General Population/Uncontrolled Exposures

| Frequency range (MHz) | Electric field Strength (V/m) | Magnetic field Strength (A/m) | Power density ($mW/cm^2$) | Averaging time (minutes) |
|---|---|---|---|---|
| 0.3 - 1.34 | 614 | 1.63 | *(100) | 30 |
| 1.34 - 30 | 824/f | 2.19/f | *(180/ $f^2$) | 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

### 2. Maximum Permissible Exposure Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = Power input to antenna

G = Power gain to the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

## 3. RESULTS

### 3-1. BT LE

| | | |
|---|---|---|
| Max EIRP Power | -1.00 | dBm |
| Max EIRP Power | 0.79 | mW |
| Prediction distance | 20.00 | cm |
| Prediction frequency | 2402 – 2480 | MHz |
| Power density at prediction frequency( S) | 0.0002 | $mW/cm^2$ |
| MPE limit for uncontrolled exposure at prediction frequency | 1.0000 | $mW/cm^2$ |

### 2.1091

| | | |
|---|---|---|
| EIRP | -1.00 | (dBm) |
| ERP | -3.15 | (dBm) |
| ERP | 0.00 | (W) |
| ERP Limit | 3.00 | (W) |
| MARGIN | 37.92 | (dB) |