


RF Exposure Evaluation Report

Product : Door sensor
Trade mark : 
Model/Type reference : 77-S108
Serial Number : N/A
Report Number : EED32P81743002
FCC ID : 2ASKH-BT02
Date of Issue : Dec. 08, 2023
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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2 Version

| Version No. | Date | Description |
|-------------|---------------|-------------|
| 00 | Dec. 08, 2023 | Original |
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4 General Information

4.1 Client Information

| | |
|--------------------------|---|
| Applicant: | PHILLIPS CONNECT TECHNOLOGIES LLC |
| Address of Applicant: | 5231 California Avenue, Suite 110 Irvine California 92617 United States |
| Manufacturer: | PHILLIPS CONNECT TECHNOLOGIES LLC |
| Address of Manufacturer: | 5231 California Avenue, Suite 110 Irvine California 92617 United States |
| Factory: | PHILLIPS CONNECT TECHNOLOGIES LLC |
| Address of Factory: | 5231 California Avenue, Suite 110 Irvine California 92617 United States |

4.2 General Description of EUT

| | |
|-----------------|---|
| Product Name: | Door sensor |
| Model No.(EUT): | 77-S108 |
| Trade Mark: |  |

4.3 Product Specification subjective to this standard

| | | |
|-----------------------|--|---------|
| Frequency Range: | 2402MHz~2480MHz | |
| Modulation Type: | GFSK | |
| Test Power Grade: | Default | |
| Test Software of EUT: | nRF Connect for Desktop.exe | |
| Antenna Type: | Internal Antenna | |
| Antenna Gain: | 2.37dBi | |
| Power Supply: | Battery: | DC 3.6V |
| Sample Received Date: | Nov. 07, 2023 | |
| Sample tested Date: | Nov. 07, 2023 to Nov. 10, 2023 | |
| Remark: | Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified. | |

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

For Stand alone:

For BLE

| Frequency (MHz) | Max. Conducted Output power (dBm) | Antenna Gain (dBi) | EIRP (dBm) | ERP (dBm) | ERP (mW) | Limit (mW) | Result |
|-----------------|-----------------------------------|--------------------|------------|-----------|----------|------------|--------|
| 2402 | -0.67 | 2.37 | 1.70 | -0.45 | 0.902 | ≤2.788 | PASS |

Note:

① EIRP=conducted power+antenna gain;

② ERP=EIRP-2.15

③ The test data refer to the report of EED32P81743001, and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***