# RF EXPOSURE REPORT



Report No.: 18070680-FCC-H Supersede Report No.: N/A

| Applicant                                       | DONGGUAN HONGSHEN ELECTRONICS CO.,LTD |                           |  |  |
|---|---------------------------------------|---------------------------|--|--|
| Product Name                                    | Bluetooth Speaker                     |                           |  |  |
| Model No.                                       | AD-T3BT                               |                           |  |  |
| Serial No.                                      | NONE                                  |                           |  |  |
| Test Standard                                   | FCC 2.109                             | FCC 2.1093                |  |  |
| Test Date                                       | July 07 to 11, 2018                   |                           |  |  |
| Issue Date                                      | July 12, 2018                         |                           |  |  |
| Test Result                                     | Pass Fail                             |                           |  |  |
| Equipment complied with the specification       |                                       |                           |  |  |
| Equipment did not comply with the specification |                                       |                           |  |  |
| Janan Liang                                     |                                       | David Huang               |  |  |
| Aaron Liang<br>Test Engineer                    |                                       | David Huang<br>Checked By |  |  |

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Test result presented in this test report is applicable to the tested sample only

#### Issued by:

#### SIEMIC (SHENZHEN-CHINA) LABORATORIES

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#### **Laboratories Introduction**

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In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

#### **Accreditations for Conformity Assessment**

| Country/Region | Scope                              |
|----------------|------------------------------------|
| USA            | EMC, RF/Wireless, SAR, Telecom     |
| Canada         | EMC, RF/Wireless, SAR, Telecom     |
| Taiwan         | EMC, RF, Telecom, SAR, Safety      |
| Hong Kong      | RF/Wireless, SAR, Telecom          |
| Australia      | EMC, RF, Telecom, SAR, Safety      |
| Korea          | EMI, EMS, RF, SAR, Telecom, Safety |
| Japan          | EMI, RF/Wireless, SAR, Telecom     |
| Singapore      | EMC, RF, SAR, Telecom              |
| Europe         | EMC, RF, SAR, Telecom, Safety      |



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## 1. Report Revision History

| Report No.     | Report Version | Description | Issue Date    |
|----------------|----------------|-------------|---------------|
| 18070680-FCC-H | NONE           | Original    | July 12, 2018 |
|                |                |             |               |
|                |                |             |               |
|                |                |             |               |
|                |                |             |               |
|                |                |             |               |

## 2. Customer information

| Applicant Name   | DONGGUAN HONGSHEN ELECTRONICS CO.,LTD                                      |  |
|------------------|--|--|
| Applicant Add    | No.262 Tanglong middle road Tangxia Town Dongguang city Guangdong province |  |
|                  | China  |  |
| Manufacturer     | DONGGUAN HONGSHEN ELECTRONICS CO.,LTD                                      |  |
| Manufacturer Add | No.262 Tanglong middle road Tangxia Town Dongguang city Guangdong province |  |
|                  | China  |  |

### 3. Test site information

| Lab performing tests | SIEMIC (Shenzhen-China) LABORATORIES                                    |  |
|----------------------|---|--|
|                      | Zone A, Floor 1, Building 2 Wan Ye Long Technology Park                 |  |
| Lab Address          | South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China |  |
|                      | 518108  |  |
| FCC Test Site No.    | 535293  |  |
| IC Test Site No.     | 4842E-1   |  |
| Test Software        | Radiated Emission Program-To Shenzhen v2.0                              |  |



Battery spec:

Trade Name:

FCC ID:

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## 4. Equipment under Test (EUT) Information

| Description of EUT:            | Bluetooth Speaker                 |
|--------------------------------|-----------------------------------|
| Main Model:                    | AD-T3BT                           |
| Serial Model:                  | NONE                              |
| Date EUT received:             | July 06, 2018                     |
| Test Date(s):                  | July 07 to 11, 2018               |
|                                |                                   |
| Antenna Gain:                  | Bluetooth: -0.68dBi               |
| Antenna Type:                  | PCB Antenna                       |
| Type of Modulation:            | Bluetooth: GFSK, π /4DQPSK        |
| RF Operating Frequency (ies):  | Bluetooth: 2402-2480 MHz          |
| Tri Operating Frequency (ics). | Bidetootiii. 2402-2400 Wii i2     |
| Number of Channels:            | Bluetooth: 79CH                   |
| Port:                          | Please refer to the user's manual |

3.7V,300Ma

2AQAH-T3

N/A



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## 5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

#### 5.1 RF Exposure

#### Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), 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.

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)]  $\cdot [\sqrt{f_{(GHz)}}] \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR,  $^{16}$  where

- f<sub>(GHz)</sub> is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- 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  $\leq 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result = 
$$P\sqrt{F}/D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



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#### 5.2 Test Result

#### Bluetooth Mode:

| Modulation | СН   | Freque ncy | Conducted Power | Tune Up<br>Power | Max Tune<br>Up Power | Max Tune<br>Up Power | Result | Limit |
|------------|------|------------|-----------------|------------------|----------------------|----------------------|--------|-------|
|            |      | (MHz)      | (dBm)           | (dBm)            | (dBm)                | (mW)                 |        |       |
| GFSK       | Low  | 2402       | -2.941          | -3±1             | -2                   | 1.585                | 0.49   | 3     |
|            | Mid  | 2441       | -2.206          | -3±1             | -2                   | 1.585                | 0.50   | 3     |
|            | High | 2480       | -2.200          | -3±1             | -2                   | 1.585                | 0.50   | 3     |
| π /4 DQPSK | Low  | 2402       | -1.596          | -1±1             | 0                    | 1.585                | 0.49   | 3     |
|            | Mid  | 2441       | -0.870          | -1±1             | 0                    | 1.585                | 0.50   | 3     |
|            | High | 2480       | -0.872          | -1±1             | 0                    | 1.585                | 0.50   | 3     |

Result: Compliance

No SAR measurement is required.