


# RF EXPOSURE REPORT

## FOR

|                             |   |  |
|-----------------------------|---|--|
| <b>Applicant</b>            | : | DongGuan JinWenHua Digital Technology Co., Ltd.  |
| <b>Address</b>              | : | Building 1, No.1 Huada Road, Tangxia Town,<br>Dongguan City, Guangdong Province, China                     |
| <b>Equipment under Test</b> | : | BB-X50 Portable BoomBox  |
| <b>Model No.</b>            | : | AI7002-BLK, F29  |
| <b>Trade Mark</b>           | : |  (for model: AI7002-BLK) |
| <b>FCC ID</b>               | : | 2AFSG-AI7002   |
| <b>Manufacturer</b>         | : | DongGuan JinWenHua Digital Technology Co., Ltd.  |
| <b>Address</b>              | : | Building 1, No.1 Huada Road, Tangxia Town,<br>Dongguan City, Guangdong Province, China                     |

**Issued By: Dongguan Dongdian Testing Service Co., Ltd.**

**Add.:** No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,  
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# REPORT

### Table of Contents

|  |   |
|--|---|
| Test report declares.....              | 3 |
| 1. General Information .....           | 5 |
| 1.1. Description of equipment .....    | 5 |
| 1.2. Assess laboratory.....            | 5 |
| 2. RF Exposure evaluation for FCC..... | 6 |

## Test Report Declare

|                             |   |  |
|-----------------------------|---|--|
| <b>Applicant</b>            | : | DongGuan JinWenHua Digital Technology Co., Ltd.  |
| <b>Address</b>              | : | Building 1, No.1 Huada Road, Tangxia Town, Dongguan City,<br>Guangdong Province, China |
| <b>Equipment under Test</b> | : | BB-X50 Portable BoomBox  |
| <b>Model No.</b>            | : | AI7002-BLK, F29  |
| <b>Trade mark</b>           | : | <b>aiwa</b> (for model: AI7002-BLK)  |
| <b>Manufacturer</b>         | : | DongGuan JinWenHua Digital Technology Co., Ltd.  |
| <b>Address</b>              | : | Building 1, No.1 Huada Road, Tangxia Town, Dongguan City,<br>Guangdong Province, China |

**Standard Used:** KDB447498 D01 General RF Exposure Guidance v06

**We Declare:**

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd. and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these assess.

**After evaluation, our opinion is that the equipment In Accordance with above standard.**

|                         |                    |                      |                               |
|-------------------------|--------------------|----------------------|-------------------------------|
| <b>Report No:</b>       | DDT-R22102104-1E02 |                      |                               |
| <b>Date of Receipt:</b> | Oct. 21, 2022      | <b>Date of Test:</b> | Oct. 21, 2022 ~ Oct. 27, 2022 |

**Prepared By:**

*Sanvin Zheng*

**Sanvin Zheng/Engineer**

**Approved By:**



**Damon Hu/EMC Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

## Revision History

| Rev. | Revisions     | Issue Date    | Revised By |
|------|---------------|---------------|------------|
| ---  | Initial issue | Oct. 27, 2022 |            |
|      |               |               |            |

## 1. General Information

### 1.1. Description of equipment

|                          |   |
|--------------------------|---|
| EUT* Name                | : BB-X50 Portable BoomBox   |
| Model Number             | : AI7002-BLK, F29   |
| Model Difference         | All model circuits share the same electrical, mechanical and physical structure, with the only difference being the model name of the prototype. Therefore, the test model is AI7002-BLK. |
| EUT function description | : Please reference user manual of this device   |
| Power Supply             | : DC 11.1V built-in battery<br>: DC 5V from external USB  |
| Radio Specification      | : Bluetooth V5.3  |
| Operation Frequency      | : 2402 MHz - 2480 MHz   |
| Modulation               | : GFSK, $\pi/4$ -DQPSK, 8DPSK   |
| Data Rate                | : 1 Mbps, 2 Mbps, 3 Mbps  |
| Antenna Gain             | : FPC antenna, maximum PK gain: 3.46 dBi  |
| Sample Number            | : S22102104-01 for conductive<br>: S22102104-02 for radiation   |

### 1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: [ddt@dgddt.com](mailto:ddt@dgddt.com).

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

## 2. RF Exposure evaluation for FCC

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where:

$f(\text{GHz})$  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

### Manufacturing Tolerance

BT

| GFSK (Peak)          |             |            |            |
|----------------------|-------------|------------|------------|
| Channel              | Channel 0   | Channel 39 | Channel 78 |
| Target (dBm)         | 3.47        | 3.08       | 3.04       |
| Tolerance $\pm$ (dB) | 1           | 1          | 1          |
| $\pi/4$ DQPSK (Peak) |             |            |            |
| Channel              | Channel 0   | Channel 39 | Channel 78 |
| Target (dBm)         | 3.41        | 3.01       | 2.98       |
| Tolerance $\pm$ (dB) | 1           | 1          | 1          |
| 8DPSK (Peak)         |             |            |            |
| Channel              | Channel 0   | Channel 39 | Channel 78 |
| Target (dBm)         | <b>3.60</b> | 3.21       | 3.19       |
| Tolerance $\pm$ (dB) | 1           | 1          | 1          |

### Estimation Result

Worse case is as below: [2402 MHz, 4.60 dBm, (2.88 mW) output power]

$(2.88/5) \cdot [\sqrt{2.402(\text{GHz})}] = 0.89 < 3.0$  for 1-g SAR

Then SAR evaluation is not required.

**END OF REPORT**