



# RF Exposure Evaluation Report

**Report No.:** JYTSZ-R12-2301587  
**Applicant:** Voxx Electronics Corporation  
**Address of Applicant:** 2365 Pontiac Road, Auburn Hills, Michigan 48326 - USA  
**Equipment Under Test (EUT)**  
Product Name: AW26  
Model No.: 2401Y, 2402Y  
Trade mark: N/A  
**FCC ID:** EZS2401Y  
**Applicable standards:** FCC CFR Title 47 Part 2 (§2.1091)  
**Date of sample receipt:** 16 Nov., 2023  
**Date of Test:** 17 Nov., to 30 Nov., 2023  
**Date of report issue:** 13 Dec., 2023  
**Test Result:** PASS

**Project by:**

*Lixia Peng*  
Project Engineer

**Date:**

*13 Dec., 2023*

**Reviewed by:**

*Victor Chang*  
Senior Engineer

**Date:**

*13 Dec., 2023*

**Approved by:**

*James Wei*  
Manager

**Date:**

*13 Dec., 2023*

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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## 1 Version

| Version No. | Date          | Description                      |
|-------------|---------------|----------------------------------|
| 00          | 01 Dec., 2023 | Original                         |
| 01          | 13 Dec., 2023 | Updated pages 4, 6 of the report |
|             |               |                                  |
|             |               |                                  |
|             |               |                                  |

## 2 Contents

|                                                                   | Page     |
|-------------------------------------------------------------------|----------|
| <b>Cover Page .....</b>                                           | <b>1</b> |
| <b>1 Version .....</b>                                            | <b>2</b> |
| <b>2 Contents.....</b>                                            | <b>3</b> |
| <b>3 General Information.....</b>                                 | <b>4</b> |
| 3.1 Client Information .....                                      | 4        |
| 3.2 General Description of E.U.T. ....                            | 4        |
| 3.3 Operating Modes.....                                          | 4        |
| 3.4 Additions to, deviations, or exclusions from the method ..... | 4        |
| 3.5 Laboratory Facility .....                                     | 4        |
| 3.6 Laboratory Location.....                                      | 4        |
| <b>4 Technical Requirements Specification .....</b>               | <b>5</b> |
| 4.1 Limits .....                                                  | 5        |
| 4.2 Test Procedure .....                                          | 5        |
| 4.3 Result .....                                                  | 6        |
| 4.4 Conclusion.....                                               | 6        |

### 3 General Information

#### 3.1 Client Information

|               |                                                                                 |
|---------------|---------------------------------------------------------------------------------|
| Applicant:    | Voxx Electronics Corporation                                                    |
| Address:      | 2365 Pontiac Road, Auburn Hills, Michigan 48326 - USA                           |
| Manufacturer: | Nutek Coropration                                                               |
| Address:      | no. 167, Lane 235, Bauchiau Rd, Xindian District, New Taeipi City 23145, Taiwan |
| Factory:      | Voxx Automotive Corporation                                                     |
| Address:      | 2351 J. Lawson Blvd, Orlando, FL 32824 - USA                                    |

#### 3.2 General Description of E.U.T.

|                        |                                                                               |                                  |
|------------------------|-------------------------------------------------------------------------------|----------------------------------|
| Product Name:          | AW26                                                                          |                                  |
| Model No.:             | 2401Y, 2402Y                                                                  |                                  |
| Operation Frequency:   | BLE: 2402MHz~2480MHz                                                          | NFC: 13.56 MHz                   |
| Modulation technology: | BLE: GFSK                                                                     | NFC: ASK                         |
| Antenna Type:          | BLE: Inverted-F Antenna                                                       | NFC: Loop Antenna                |
| Antenna gain:          | BLE: 1.95dBi (declare by applicant)                                           | NFC: 0dBi (declare by applicant) |
| Test Sample Condition: | The test samples were provided in good working order with no visible defects. |                                  |

#### 3.3 Operating Modes

| Operating mode | Detail description                                       |
|----------------|----------------------------------------------------------|
| BLE mode       | Keep the EUT in continuously transmitting in BLE mode    |
| NFC Tx mode    | Keep the EUT in continuously transmitting in NFC Tx mode |

#### 3.4 Additions to, deviations, or exclusions from the method

|    |
|----|
| No |
|----|

#### 3.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

#### 3.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

## 4 Technical Requirements Specification

### 4.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

| Frequency range (MHz)                                   | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|---------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures        |                               |                               |                                     |                          |
| 0.3–3.0                                                 | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0–30                                                  | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30–300                                                  | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300–1500                                                |                               |                               | f/300                               | 6                        |
| 1500–100,000                                            |                               |                               | 5                                   | 6                        |
| (B) Limits for General Population/Uncontrolled Exposure |                               |                               |                                     |                          |
| 0.3–1.34                                                | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34–30                                                 | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30–300                                                  | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300–1500                                                |                               |                               | f/1500                              | 30                       |
| 1500–100,000                                            |                               |                               | 1.0                                 | 30                       |

### 4.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

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

R = distance to the centre of radiation of the antenna

### 4.3 Result

BLE worse case below:

| Frequency (MHz) | Maximum Output power (dBm) | Maximum Output power (mW) | Antenna Gain (dBi) | Antenna Gain (numeric) | Distance (cm) | Result (mW/cm <sup>2</sup> ) | Limits for General Population/ Uncontrolled Exposure (mW/cm <sup>2</sup> ) |
|-----------------|----------------------------|---------------------------|--------------------|------------------------|---------------|------------------------------|----------------------------------------------------------------------------|
| BLE             |                            |                           |                    |                        |               |                              |                                                                            |
| 2402            | 2.111                      | 1.63                      | 1.95               | 1.57                   | 20.00         | 0.00006                      | 1.0                                                                        |

NFC worse case below:

| Frequency (MHz) | Maximum field strength@3m ( dBuV/m) | Maximum field strength@3m (V/m) | Antenna Gain (dBi) | Antenna Gain (numeric) | Distance (m) | Output power (mW) | Limit for SAR test exemption (mW) |
|-----------------|-------------------------------------|---------------------------------|--------------------|------------------------|--------------|-------------------|-----------------------------------|
| 13.56           | 66.03                               | 0.002                           | 0                  | 1                      | 3            | 0.001             | 1                                 |

Simultaneous transmission(Worse mode):

| ANT No.       | Mode | Ratio   | Total Ratio | Limit |
|---------------|------|---------|-------------|-------|
| Main ANT      | BLE  | 0.00006 | 0.001       | 1.00  |
| Secondary ANT | NFC  | 0.001   |             |       |

Note: Just the worst case mode was shown in report.

### 4.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

-----End of report-----