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47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1093 KDB 680106 D01 v04

## **Maximum Permissible Exposure Report**

For

### CUP HOLDER TRANSMITTER ASSEMBLY

Model: 4361113

### **Trade Name: VOXX Automotive**

Issued to

JET OPTOELECTRONICS CO.,LTD. 7F-2, No. 300, Yangguang St., Neihu Dist., Taipei City 11491,Taiwan

Issued by

Compliance Certification Services Inc. Wugu Laboratory No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan Issued Date: May 29, 2024

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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| Report No.: INIVK2402000558K3 | Report No.: | TMWK2402000558KS |
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### **Revision History**

| Rev. | lssue<br>Date | Revisions                        | Effect Page | Revised By |
|------|---------------|----------------------------------|-------------|------------|
| 00   | May 16, 2024  | Initial Issue                    | ALL         | Doris Chu  |
| 01   | May 23, 2024  | See the following Note Rev. (01) | ALL         | Doris Chu  |
| 02   | May 29, 2024  | See the following Note Rev. (02) | P.9, P.A-1  | Doris Chu  |

Rev. (01)

1. Modify test equipment and all test data.

Rev. (02)

1. Add note in section 5.4.

2. Modify section 6 to test setup photo and setup photo.



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# 1. TEST RESULT CERTIFICATION

| APPLICABLE STANDARDS  |             |  |  |  |  |
|---|-------------|--|--|--|--|
| STANDARD  | TEST RESULT |  |  |  |  |
| 47 C.F.R. Part 1, Subpart I, Section 1.1310<br>47 C.F.R. Part 2, Subpart J, Section 2.1093<br>KDB 680106 D01 Wireless Power Transfer v04            | Compliance  |  |  |  |  |
| Statements of Conformity  |             |  |  |  |  |
| Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty. |             |  |  |  |  |

Approved by:

Story Thou

Sky Zhou Asst. Section Manager Compliance Certification Services Inc.



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# 2. EUT SPECIFICATION

| EUT                        | CUP HOLDER TRANSMITTER ASSEMBLY  |  |  |  |
|----------------------------|--|--|--|--|
| Model                      | 4361113  |  |  |  |
| Trade Name                 | VOXX Automotive  |  |  |  |
| Model Discrepancy          | N/A  |  |  |  |
| Frequency Range            | <ul> <li>☐ 196 KHz</li> <li>☐ Others</li> </ul>  |  |  |  |
| Device category            | <ul> <li>Portable (&lt;20cm separation)</li> <li>Mobile (&gt;20cm separation)</li> <li>Others</li> </ul> |  |  |  |
| Exposure<br>classification | <ul> <li>Occupational/Controlled exposure</li> <li>General Population/Uncontrolled exposure</li> </ul>   |  |  |  |
| Antenna<br>Specification   | core Antenna   |  |  |  |
| Received Date              | February 23, 2024  |  |  |  |
| Date of Test               | April 8, 2024  |  |  |  |

#### Remark:

1. For more details, please refer to the User's manual of the EUT.

2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.



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## 3. MEASUREMENT EQUIPMENT USED

#### 3.1 Equipment Used for Emissions Measurement

| RF Conducted Test Site (Shielding Room) |   |  |  |  |         |
|---|---|--|--|--|---------|
| Equipment                               | Manufacturer Model S/N Cal                    |  |  |  | Cal Due |
| Antenna                                 | NARDA EHP-200AC 180ZX11018 2023-04-26 2024-04 |  |  |  |         |
| Software                                | EHP200-TS                                     |  |  |  |         |

#### 3.2 MEASUREMENT UNCERTAINTY

| Parameter               | Frequency    | Expanded Uncertainty<br>(dB) | k |
|-------------------------|--------------|------------------------------|---|
| Electric Field Strength | 3KHz ~300KHz | ± 14.48 %                    | 2 |
|                         | 30KHz ~10MHz | ± 14.67 %                    | 2 |
| Magnetic Field Strength | 3KHz ~300KHz | ± 14.19 %                    | 2 |
|                         | 30KHz ~10MHz | ± 14.14 %                    | 2 |

These uncertainties represent an expanded uncertainty expressed approximately at the 95% confidence level using a coverage factor of k=2



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### 4. LIMIT

Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310.

§1.1310: 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), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of the chapter.

| Frequency<br>range<br>(MHz)                             | Electric field<br>strength<br>(V/m) | Magnetic field<br>strength<br>(A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
|---|-------------------------------------|-------------------------------------|--|-----------------------------|
|   | (A) Limits for C                    | ccupational/Contr                   | olled Exposure                         |                             |
| 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                           |
| 300-1,500   |                                     |                                     | f/300                                  | 6                           |
| 1,500-100,000   |                                     |                                     | 5                                      | 6                           |
| (B) Limits for General Population/Uncontrolled Exposure |                                     |                                     |  |                             |
| <u>0.3-1.34</u>   | <u>614</u>                          | <u>1.63</u>                         | * 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                          |
| 300-1,500   |                                     |                                     | f/1500                                 | 30                          |
| 1,500-100,000   |                                     |                                     | 1.0                                    | 30                          |

f = frequency in MHz

\* = Plane-wave equivalent power density

Note 1 to Table 1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Note 2 to Table 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.



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# 5. HUMAN EXPOSURE ASSESSMENT

### 5.1 Support Equipment

| No. | Device Type                              | Brand    | Model    | Series No. | Cal Date   | Cal Due    |
|-----|--|----------|----------|------------|------------|------------|
| 1   | Cup holder light<br>receiver<br>assembly | Nissan   | N/A      | N/A        | N/A        | N/A        |
| 2   | DC Power<br>Supply                       | GWINSTEK | SPS-3610 | GPE880163  | 2023-11-16 | 2024-11-15 |

### 5.2 Test Setup

The test site used to collect data is a Shield Room.

The measurement distance is from the edge of the device to the center of the measurement probe. The test distance is 10 cm for Right (Edge 2) and 11 cm for Left (Edge 4). Test every 2cm until 20cm.





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### 5.3 Electric Field Test Results

| Temperature:                 | 22.5~23.5        | °C                  | Test Date:       | April 8, 20    | )24                   |
|------------------------------|------------------|---------------------|------------------|----------------|-----------------------|
| Humidity:                    | 40~45% F         | RH                  | Tested by:       | Jack Yang      | 9                     |
| Operating Frequency<br>(kHz) | Distance<br>(cm) | Probe from EUT Side | E-field<br>(V/m) | Limit<br>(V/m) | 50% of MPElimit (V/m) |
|                              | 10               | Right (Edge2)       | 0.7683           | 614            | 307                   |
|                              | 12               | Right (Edge2)       | 0.6778           | 614            | 307                   |
| 102.5                        | 14               | Right (Edge2)       | 0.5203           | 614            | 307                   |
| 193.0                        | 16               | Right (Edge2)       | 0.4691           | 614            | 307                   |
|                              | 18               | Right (Edge2)       | 0.4059           | 614            | 307                   |
|                              | 20               | Right (Edge2)       | 0.3969           | 614            | 307                   |
|                              | 11               | Left (Edge4)        | 0.6389           | 614            | 307                   |
|                              | 12               | Left (Edge4)        | 0.5421           | 614            | 307                   |
| 193.5                        | 14               | Left (Edge4)        | 0.4772           | 614            | 307                   |
|                              | 16               | Left (Edge4)        | 0.4326           | 614            | 307                   |
|                              | 18               | Left (Edge4)        | 0.4052           | 614            | 307                   |
|                              | 20               | Left (Edge4)        | 0.3609           | 614            | 307                   |

### 5.4 Magnetic Field Test Results

| Temperature:                 | 22.5~23.5        | °C                  | Test Date:       | April 8, 20    | 24                    |
|------------------------------|------------------|---------------------|------------------|----------------|-----------------------|
| Humidity:                    | 40~45% F         | RН                  | Tested by:       | Jack Yang      | )                     |
| Operating Frequency<br>(kHz) | Distance<br>(cm) | Probe from EUT Side | H-field<br>(A/m) | Limit<br>(A/m) | 50% of MPElimit (A/m) |
|                              | 10               | Right (Edge2)       | 0.1981           | 1.63           | 0.815                 |
|                              | 12               | Right (Edge2)       | 0.1777           | 1.63           | 0.815                 |
| 103.5                        | 14               | Right (Edge2)       | 0.1017           | 1.63           | 0.815                 |
| 193.0                        | 16               | Right (Edge2)       | 0.0726           | 1.63           | 0.815                 |
|                              | 18               | Right (Edge2)       | 0.0503           | 1.63           | 0.815                 |
|                              | 20               | Right (Edge2)       | 0.037            | 1.63           | 0.815                 |
|                              | 11               | Left (Edge4)        | 0.197            | 1.63           | 0.815                 |
|                              | 12               | Left (Edge4)        | 0.1736           | 1.63           | 0.815                 |
| 193.5                        | 14               | Left (Edge4)        | 0.1139           | 1.63           | 0.815                 |
|                              | 16               | Left (Edge4)        | 0.0777           | 1.63           | 0.815                 |
|                              | 18               | Left (Edge4)        | 0.0523           | 1.63           | 0.815                 |
|                              | 20               | Left (Edge4)        | 0.0382           | 1.63           | 0.815                 |

Note:

The DUT frequency range is 191kHz~201kHz.



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### 5.5 Highest H-field and E-field Test Plots



### Right (Edge 2) \_10cm



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|             |                  |



# Left (Edge 4) \_11cm



- End of Test Report -