

RF Exposure Report

Report No.: FCC_SL21032601-RIVIAN-007_MPE_NDH Rev 1.0

Product(PMN): NFC Door Handle

Test Model: NDH 1.0

HW Version: D

SW Version: 2.27

Series Model: N/A

FCC ID: 2AW3A-1NAG20NDH

Received Date: 04/23/2021

Test Date: 04/23/2021-04/27/2021

Issued Date: 08/06/2021

Applicant: RIVIAN

Address: 2708 Orchard Pkwy Ste. 10 San Jose, CA 95134

Issued By: Bureau Veritas Consumer Products Services, Inc.

Lab Address: 775 Montague Expressway, Milpitas, CA 95035

Test Location (1): 775 Montague Expressway, Milpitas, CA 95035

**FCC Registration /
Designation Number:** 540430



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

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Release Control Record

Issue No.	Description	Date Issued
FCC_SL21032601-RIVIAN-007_MPE	Original Release	06/10/2021
FCC_SL21032601-RIVIAN-007_MPE Rev_1.0	Change model name description per client review	06/23/2021
FCC_SL21032601-RIVIAN-007_MPE_NDH	Update per review	07/08/2021
FCC_SL21032601-RIVIAN-007_MPE_NDH Rev 1.0	Update the result	08/06/2021

1 Certificate of Conformity

Product(PMN): NFC Door Handle

Brand: RIVIAN

Test Model: NDH 1.0

HW Version: D

SW Version: 2.27

Series Model: N/A

Sample Status: Engineering sample

Applicant: RIVIAN

Test Date: 04/23/2021-04/27/2021

Standards: FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services, Inc., Milpitas Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

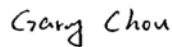
Prepared by : _____



Said Abdelwafi / Test Engineer

Date: _____ 08/06/2021

Approved by : _____



Gary Chou/ Engineer Reviewer

Date: _____ 08/06/2021

2 Evaluation Result

Following FCC KDB 447498 D01 “General SAR test exclusion guidance”

The corresponding SAR Exclusion Threshold condition, listed below:

1) 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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0$$
 for 1-g SAR and ≤ 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. The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:

- a) [Threshold at 50 mm in step 1) + (test separation distance - 50mm) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz
- b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.

- a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm.
- b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm.
- c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

3 SAR Test Exclusion Thresholds

Model	Frequency (MHz)	Max. Power (mW)	Tune-Up Tolerance	Min. test separation distance (mm)	SAR test exclusion calculation value	1-g SAR test exclusion thresholds	Result
NDH	13.56	0.00001033	±1dB	5	0.000000303	3	Pass

Power Level in EIRP(dBm) = E (dB μ V/m) + 20log(D) - 104.8; where D is the measurement distance in meters.

$$45.4 + 20\log(3) - 104.8 = -49.857$$

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The antenna type is PCB Loop antenna.

4 Conclusion

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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