# RF EXPOSURE EVALUATION REPORT

| | | |
|---|---|---|
| FCC ID | : | 2AW3A-1NAC21ACUCMR |
| Equipment | : | EV Charger |
| Brand Name | : | RIVIAN |
| Model Name | : | PT00057325 |
| Marketing Name | : | RIVIAN WALL CHARGER |
| Applicant | : | Rivian Automotive LLC.<br>607 Hansen Way, Palo Alto, CA 94304 |
| Manufacturer | : | Lite-On Technology Corporation<br>15F , No.555, Siyuan Rd., Xinzhuang Dist.,<br>New Taipei City, Taiwan (R.O.C.) |
| Standard | : | 47 CFR Part 2.1091 |

**We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.**

**Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.**

**The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full**

Cona Huang

**Approved by: Cona Huang / Deputy Manager**

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# History of this test report

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| FA230117 | Rev. 01 | Initial issue of report | Sep. 14, 2022 |
| FA230117 | Rev. 02 | Update section 4 | Sep. 28, 2022 |
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# 1. Description of Equipment Under Test (EUT)

| Product Feature & Specification | |
|---|---|
| EUT Type | EV Charger |
| Brand Name | RIVIAN |
| Model Name | PT00057325 |
| Marketing Name | RIVIAN WALL CHARGER |
| FCC ID | 2AW3A-1NAC21ACUCMR |
| Wireless Technology and Frequency Range | WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz<br>Bluetooth: 2400 MHz ~ 2483.5 MHz |
| Mode | WLAN: 802.11b/g/n HT20<br>Bluetooth LE |
| HW Version | 1 |
| EUT Stage | Production Unit |

**Reviewed by: Jason Wang**

**Report Producer: Carlie Tsai**

## 2. Maximum RF average output power among production units

**<WLAN>**

| Mode | | Tune-up Limit |
|---|---|---|
| 2.4GHz WLAN | 802.11b | 17.50 |
| | 802.11g | 20.50 |
| | 802.11n-HT20 | 21.00 |

**<Bluetooth>**

| Mode | Tune-up Limit | |
|---|---|---|
| | LE | |
| | 1Mbps | 2Mbps |
| Bluetooth | -4.0 | -10.0 |

## 3. RF Exposure Exemption Thresholds

According to Part1.1307b, Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by:

$$\text{Pth (mW)} = \text{ERP}_{20cm}\,(d / 20)^{x} \quad \text{for distance } d \le 20cm$$

$$\text{Pth (mW)} = \text{ERP}_{20cm} \quad \text{for distance } 20cm < d \le 40cm$$

$$x = -log10\left(\frac{60}{ERP_{20cm}\sqrt{f}}\right)$$

$\text{ERP}_{20cm}$(mW) 0.3 GHz ≤ f < 1.5 GHz: 2040 f
1.5 GHz ≤ f ≤ 6 GHz: 3060

# 4. Radio Frequency Radiation Exposure Evaluation

## 4.1. RF Exposure evaluation

| Band | Antenna Gain (dBi) | Maximum Conducted Power (dBm) | Maximum EIRP (dBm) | Maximum ERP (dBm) | Maximum EIRP (mW) | Maximum ERP (mW) | $P_{th}$ | $P_{th}$ (mW) | Maximum Output RF Power Limit (mW) | option(b) Threshold (mW) | option(b) P/Pth |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WLAN2.4GHz Band | 2.2 | 21.0 | 23.2 | 21.05 | 208.93 | 127.35 | 21.05 | 127.35 | 3981 | 3060.000 | 0.0416 |
| Bluetooth | 0.5 | -4.0 | -3.5 | -5.65 | 0.45 | 0.27 | -4.00 | 0.40 | 3981 | 3060.000 | 0.0001 |

## 4.2. Sim-Tx analysis

| WLAN 2.4GHz P/Pth Ratio | Bluetooth P/Pth Ratio | Σ (P/Pth Ratio) of WLAN 2.4GHz + Bluetooth |
|---|---|---|
| 0.0416 | 0.0001 | 0.0417 |

**Note:**

1. According part1.1307b, the P/Pth Ratio is using for Sim-Tx analysis, above table was showing WLAN transmitting with Bluetooth and the summation ratio is smaller than 1

## Conclusion:

According to 47 CFR §1.1307, the RF exposure analysis concludes that the RF Exposure is FCC compliant.