

# RF EXPOSURE EVALUATION REPORT

**FCC ID** : 2AW3A-1NAC21ACUCM  
**Equipment** : EV Charger  
**Brand Name** : RIVIAN  
**Model Name** : PT00057322  
PT00261633  
PT00401761  
PT00340197  
**Marketing Name** : RIVIAN WAYPOINTS CHARGER  
RIVIAN FLEET AC DISPENSER  
**Applicant** : Rivian Automotive LLC.  
607 Hansen Way, Palo Alto, CA 94304  
**Manufacturer** : Lite-On Technology Corporation  
15F , No.555, Siyuan Rd., Xinzhuang Dist.,  
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



Approved by: Cona Huang / Deputy Manager



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### History of this test report

Report No.	Version	Description	Issued Date
FA230116	Rev. 01	Initial issue of report	Sep. 14, 2022
FA230116	Rev. 02	Update section 4	Sep. 27, 2022

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	EV Charger
Brand Name	RIVIAN
Model Name	PT00057322 PT00261633 PT00401761 PT00340197
Marketing Name	RIVIAN WAYPOINTS CHARGER RIVIAN FLEET AC DISPENSER
FCC ID	2AW3A-1NAC21ACUCM
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 25: 1850 MHz ~ 1915 MHz WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	GSM/GPRS LTE: QPSK, 16QAM WLAN: 802.11b/g/n HT20 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**

**<WWAN>**

Mode		Maximum Average power(dBm)
GSM	850	32.50
	1900	30.00
LTE (Cat M1)	Band 2	23.50
	Band 4	23.00
	Band 5	23.00
	Band 12	23.00
	Band 13	23.50
	Band 25	24.00
LTE (NB-IOT)	Band 2	23.50
	Band 4	24.00
	Band 5	23.50
	Band 12	23.50
	Band 13	23.00
	Band 25	24.50

**<WLAN>**

Mode		Tune-up Limit
2.4GHz WLAN	802.11b	18.00
	802.11g	21.00
	802.11n-HT20	21.00

**<Bluetooth>**

Mode	Tune-up Limit	
	LE	
	1Mbps	2Mbps
Bluetooth	-3.5	-8.5



### **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:

$$P_{th} \text{ (mW)} = ERP_{20cm} (d / 20)^x \text{ for distance } d \leq 20cm$$

$$P_{th} \text{ (mW)} = ERP_{20cm} \text{ for distance } 20cm < d \leq 40cm$$

$$x = -\log_{10} \left( \frac{60}{ERP_{20cm} \sqrt{f}} \right)$$

ERP <sub>20cm</sub> (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 <sub>th</sub>	P <sub>th</sub> (mW)	Maximum Output RF Power Limit (mW)	option(b) Threshold (mW)	option(b) P/Pth Ratio	
GSM/GPRS 850	2.70	32.50	26.2	24.05	416.87	254.10	23.50	223.87	7000	1681.368	0.1331	
GSM/GPRS 1900	2.90	30.00	23.9	21.75	245.47	149.62	21.00	125.89	2000	3060.000	0.0411	
LTE (Cat M1)	LTE Band 2	2.90	23.50	26.4	24.25	436.52	266.07	24.25	266.07	2000	3060.000	0.0870
	LTE Band 4	2.60	23.00	25.6	23.45	363.08	221.31	23.45	221.31	1000	3060.000	0.0723
	LTE Band 5	2.70	23.00	25.7	23.55	371.54	226.46	23.55	226.46	7000	1680.960	0.1347
	LTE Band 12	3.60	23.00	26.6	24.45	457.09	278.61	24.45	278.61	3000	1425.960	0.1954
	LTE Band 13	2.30	23.50	25.8	23.65	380.19	231.74	23.65	231.74	3000	1585.080	0.1462
	LTE Band 25	2.90	24.00	26.9	24.75	489.78	298.54	24.75	298.54	2000	3060.000	0.0976
LTE (NB-IOT)	LTE Band 2	2.90	23.50	26.4	24.25	436.52	266.07	24.25	266.07	2000	3060.000	0.0870
	LTE Band 4	2.60	24.00	26.6	24.45	457.09	278.61	24.45	278.61	1000	3060.000	0.0910
	LTE Band 5	2.70	23.50	26.2	24.05	416.87	254.10	24.05	254.10	7000	1680.960	0.1512
	LTE Band 12	3.60	23.50	27.1	24.95	512.86	312.61	24.95	312.61	3000	1425.960	0.2192
	LTE Band 13	2.30	23.00	25.3	23.15	338.84	206.54	23.15	206.54	3000	1585.080	0.1303
	LTE Band 25	2.90	24.50	27.4	25.25	549.54	334.97	25.25	334.97	2000	3060.000	0.1095
WLAN2.4GHz Band	2.20	21.00	23.2	21.05	208.93	127.35	21.05	127.35	3981	3060.000	0.0416	
Bluetooth	0.50	-3.50	-3.0	-5.15	0.50	0.31	-3.50	0.45	3981	3060.000	0.0001	

### 4.2. Sim-Tx analysis

WWAN P/Pth Ratio	WLAN 2.4GHz P/Pth Ratio	Bluetooth P/Pth Ratio	Σ (P/Pth Ratio) of WWAN + WLAN 2.4GHz + Bluetooth
0.2192	0.0416	0.0001	0.2609

**Note:**

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