

RF Exposure Report (FCC)

Report No.: WIR113585-FCC-RF Exposure

Test Model: JuiceBox 2.01 40A

FCC ID: 2A4LRJB201NA

Received Date: 02 /14 /2022

Test Date: 02 /17/ 2022 – 02 /28 /2022

Issued Date: 04/ 06/ /2022

Applicant: CESI S.p.A

Address: Via Raffaele Rubattino 54 Milano, Italy 20134

Issued By: Eurofins Electrical and Electronic Testing NA, Inc.

Lab Address: 3162 Belick St. Santa Clara CA, 95054



1. Certificate of Conformity**Product:** EV Charger**Brand:** CESI S.p.A**Test Model:** JuiceBox 2.01 40A**Series Model:** JuiceBox 2.01 32A, JuiceBox 2.01 48A, JuiceBox 2.01 80A**Sample Status:** Engineering Sample**Applicant:** CESI S.p.A**Test Date:** 02 /17/ 2022 – 03 /31 /2022**Standard:** 47 CFR FCC Part 2.1093

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Eleazar Zuniga,
Director, Wireless Laboratory

Revision	Report Date	Reason for Revision
Ø	April 06, 2022	Initial Issue.

2. RF Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
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 ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz; *Plane-wave equivalent power density

2.1 MPE Calculation Formula

$$Pd = (P_{out} * G) / (4 * \pi * r^2)$$

Where

Pd = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

2.2 Antenna Gain

NFC : PCB LOOP ANTENNA

WLAN : Chip Antenna with 1.83 dBi gain

BLE : PCB Antenna with 1 dBi gain

Cellular:

The antenna type is Flexible Ultra Wide Band Antenna antenna with

BAND 2/ 4 : 5 dBi gain.

BAND 5/ 12/ 13 : 2.7 dBi gain.

2.3 Calculation Result of Maximum Conducted Power

Type	Frequency Band (MHz)	Max Power (dBm)	Max Power (mW)	Turn-Up Tolerance	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN 2.4GHz	2437	18.79	75.683	±1dB	1.86	20	0.029104	1
WCDMA B2	1852.4	23.66	232.273	±1dB	5	20	0.184056	1
WCDMA B5	836.6	23.59	228.559	±1dB	2.7	20	0.106647	0.5577
LTE B2	1880	23.43	220.292	±1dB	5	20	0.174562	1
LTE B13	847.5	22.90	194.984	±1dB	2.7	20	0.090981	0.656
BLE	2402	-3.08	0.4920	±1dB	1	20	0.000155	1
NFC	13.56	-28.49	0.00141579	±1dB	0	20	0	0.703

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- This device contains

	Model No.	FCC ID	Note
Cellular	Telit	RI7LE910NAV2	-
WLAN	Silicon Labs	QOQWGM160P	-
RFID	NXP	OWRCLEV6630B	-
BLE	Silicon Labs	QOQ13	-

3. Conclusion

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

Co-location worse case (WLAN 2.4GHz & WCDMA/ LTE & NFC)

Total MPE Percentage for

1.WLAN 2.4GHz, LTE/ WCDMA, NFC to transmit simultaneously.

$t = 0.2204 < 1$

**Therefore, the maximum calculations of above situations are less than the “1” limit.
The SAR evaluation is not required.**

4. Model difference declaration Letter:



Enel X North America, Inc.
360 Industrial Road
San Carlos, CA 94070
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03/04/2022

Eurofins Electrical and Electronic Testing NA, Inc.
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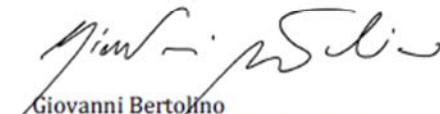
RE: Model Declaration

We, Enel X North America, declare that following JuiceBox 2.01 product family filed under FCC ID: 2A4LRJB201NA.

JuiceBox 32, JuiceBox 40, JuiceBox 48 and JuiceBox 80, all have the same main board with the same RF devices. The only difference is the charging power output. JuiceBox 48 and JuiceBox 80 has a different relay board but it has no impact to emission.

Please contact me if there is any information you may need.

Sincerely,



Giovanni Bertolino
Head of e-Mobility, North America