


# RF EXPOSURE EVALUATION REPORT

**FCC ID** : 2AEIM-1735511  
**Equipment** : Universal Wall Connector  
**Brand Name** : Tesla  
**Model Name** : 1734412-XX-Y  
Note: For internal purposes, the X will be the style code and Y will be the revision. X and Y can be any from 0~9 or A~Z  
**Applicant** : Tesla, Inc.  
3500 DEER CREEK ROAD PALO ALTO, CA 94304  
**Manufacturer** : Tesla, Inc.  
3500 DEER CREEK ROAD PALO ALTO, CA 94304  
**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.

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Approved by: Cona Huang / Deputy Manager



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## History of this test report

Report No.	Version	Description	Issued Date
FA230315009-01	Rev. 01	Initial issue of report	Aug. 21, 2023

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

Product Feature & Specification	
EUT Type	Universal Wall Connector
Brand Name	Tesla
Model Name	1734412-XX-Y Note: For internal purposes, the X will be the style code and Y will be the revision. X and Y can be any from 0~9 or A~Z
FCC ID	2AEIM-1735511
Integrated WLAN Module	Brand Name: AzureWave Model Name: AW-CU300 FCC ID: TLZ-CU300
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2412 MHz ~ 2462 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 MHz UHF: 315 MHz
Mode	WLAN: 802.11b/g/n HT20 Bluetooth LE NFC: ASK UHF: OOK

Reviewed by: Jason Wang

Report Producer: Daisy Peng

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

Mode	Maximum Average power(dBm)
WLAN2.4GHz Band	23.11
UHF	15.00
Bluetooth	1.84

Mode	Maximum EIRP power(dBm)
NFC	-21.06

Note : EIRP is calculated using 3-meter field strength conversion.

### 3. Determination of exemption

Per 1.1307(b)(3), (i) For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

- (A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);
- (B) 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:

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

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

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

$$ERP_{20cm} \text{ (mW)} \begin{array}{ll} 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz:} & 2040 f \\ 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz:} & 3060 \end{array}$$

- (C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least  $\lambda/2\pi$ , where  $\lambda$  is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of  $\lambda/4$  or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$ .
1.34-30	$3,450 R^2/f^2$ .
30-300	$3.83 R^2$ .
300-1,500	$0.0128 R^2 f$ .
1,500-100,000	$19.2 R^2$ .

## **4. RF Exposure Evaluation**

### **4.1. Standalone assessment**

**General Note:**

1.  $P_i$  is mean the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source  $i$  at a distance between 0.5 cm and 40 cm
2.  $P_{th}$  is mean the exemption threshold power ( $P_{th}$ ) according to the § 1.1307(b)(3)(i)(B) formula for fixed, mobile, or portable RF source  $i$ .
3. In this report was used Part1.1307(b)(3)(i)(B) perform RF Exposure evaluation
4. The distance of 20cm is for this device

Band	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Maximum EIRP (dBm)	Maximum ERP (dBm)	Maximum EIRP (mW)	Maximum ERP (mW)	$P_i$ (dBm)	$P_i$ (mW)	Part1.1307 option(b) Threshold (mW)	Part1.1307 option(b) $P_i/P_{th}$
WLAN2.4GHz Band	5.12	23.11	28.23	26.08	665.273	405.509	26.08	405.51	3060.000	0.1325
UHF	-39.28	15.00	-24.28	-26.43	0.004	0.002	15.00	31.62	642.600	0.0492
Bluetooth	2.30	1.84	4.14	1.99	2.594	1.581	1.99	1.58	3060.000	0.0005
NFC			-21.06	-23.21	0.008	0.005	-21.06	0.01	27.662	0.0003

### **Conclusion:**

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