RF EXPOSURE EVALUATION REPORT

FCC ID	:	2AEIM-1877513
Equipment	:	V4 Supercharger NA Connector/Handle
Brand Name	:	Tesla
Model Name	:	1877513-XX-Y
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.

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
FA230126001	Rev. 01	Initial issue of report	Aug. 18, 2023

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	V4 Supercharger NA Connector/Handle
Brand Name	Tesla
Model Name	1877513-XX-Y
FCC ID	2AEIM-1877513
Wireless Technology and Frequency Range	UHF: 315 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	OOK Bluetooth LE

Reviewed by: Jason Wang

Report Producer: Daisy Peng

2. Maximum RF average output power among production units

Mode	Maximum Average power(dBm)
UHF	13.00
Bluetooth	2.01

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
UHF	-10.94	13.00	2.1	0.002	1.61	0.000	0.210
Bluetooth	4.10	2.01	6.1	0.004	4.08	0.001	1.000

Conclusion:

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