

RF Exposure Report

Project Number: 5226552**Offer Number:** SUW-202409007058**Report Number:** 5226552EMC03**Revision Level:** 2**Client:** OXOS Medical, Inc**Equipment Under Test:** W1 Wireless Charger
(part of K1 Cart, an accessory to MC2 System)**Model Number:** W1**FCC ID:** 2A8SX-W1**Applicable Standards:** FCC CFR 47 § 1.1310 RF Radiation Exposure Limits

FCC KDB 680106 D01 Wireless Power Transfer v04

FCC KDB 447498 D01 General RF Exposure Guidance v06

Report issued on: 12 December 2024**Test Result:** Compliant

FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

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1 General Information

1.1 Client Information

Company Name: OXOS Medical, Inc
Address: 1100 Peachtree Street NE, Suite 700
City, State, Zip, Country: Atlanta, GA 30309, USA

1.2 Test Laboratory

Company Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

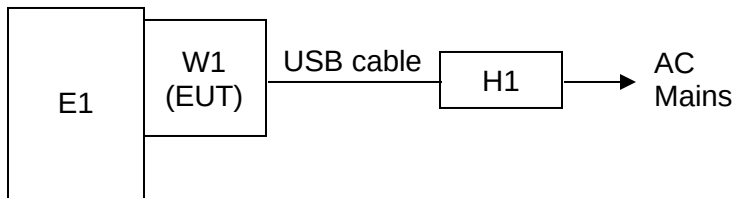
1.3 General Information of EUT

Equipment Under Test: Wireless Charger
EUT Model Number: W1
System Name: W1 is part of K1 Cart, an accessory to MC2 X-ray System
Serial Numbers: Emitter (E1) – SN 1283
Wired Charger (H1) – Lot 10146
Wireless Charger (W1) – Lot 10258
Hardware Versions: Emitter (E1) - Rev I
Wired Charger (H1) – Rev C
Wireless Charger (W1) – Rev D
Software Version: v4.0.0-alpha
Frequency Range: 110 – 140 kHz
Data Mode: Wireless Power Transfer (with load modulation)
Antenna: Coil with 37.7mm diameter, 16 turns, 5A max current
System Rated Voltage: 120 Vac 50/60 Hz
System Test Voltage: 120 Vac 60Hz
EUT Power: USB-C 20V, 5A (from H1 wired charger)
Sample Received Date: 05 September 2024
Dates of testing: 06 September 2024

1.4 Operating Modes and Conditions

The W1 wireless charger was powered by the wired charger (H1), and a discharged emitter (E1) was mounted on the wireless charger (W1). This produced maximum charging of E1 which was in direct physical contact with W1 (no separation distance). The system was on, but not emitting x-rays.

1.5 EUT Connection Block Diagram



1.6 System Components

Device Reference	Manufacturer	Description	Model Number	Serial/Lot Number
W1	OXOS Medical, Inc	Wireless Charger (EUT)	W1	Lot 10258
E1	OXOS Medical, Inc	Emitter (WPT Client)	E1	SN 1283
H1	OXOS Medical, Inc	Wired Charger	H1	Lot 10146

2 RF Exposure

2.1 Test Result

Test Description	FCC Rule Part	Test Result
RF Exposure	§1.1310	Compliant

2.2 Test Method

Using an Electromagnetic Field Meter, magnetic field strength measurements were taken at several distances on all accessible sides of the wireless charger (EUT).

From section 3.2 of KDB 680106 D01 Wireless Power Transfer v04:

The RF exposure limits, as set forth in § 1.1310, do not cover the frequency range below 100 kHz for Specific Absorption Rate (SAR) and below 300 kHz for Maximum Permitted Exposure (MPE). In addition, present limitations of RF exposure evaluation systems prevent an accurate evaluation of SAR below 4 MHz. For these reasons, a specific MPE-based RF Exposure compliance procedure for devices operating in the aforementioned low-frequency ranges has been set in place. This procedure is applicable to Equipment Authorization of all RF devices, thus including, but not limited to, Part 18 and WPT devices.

Accordingly, for § 2.1091-Mobile devices, the MPE limits between 100 kHz to 300 kHz are to be considered the same as those at 300 kHz in Table 1 of § 1.1310, that is, 614 V/m and 1.63 A/m, for the electric field and magnetic field, respectively. For § 2.1093-Portable devices below 4 MHz and down to 100 kHz, the MPE limits in § 1.1310 (with the 300 kHz limit applicable all the way down to 100 kHz) can be used for the purpose of equipment authorization in lieu of SAR evaluations.

For all the cases mentioned above, E and H measurements should be made from all sides of the transmitter, along all the principal axes defined with respect to the orientation of the transmitting element (e.g., coil or antenna). When clearly demonstrated, symmetry considerations may be used to reduce the amount of testing. Furthermore, for "low-frequency" loop/coil emitting structures that lead to dominant H-field near-field emissions (i.e., with E/H ratio less than 1/10 of the 377-ohm free space wave impedance, typically frequencies less than 1 MHz), only H-field measurements are sufficient for demonstrating MPE limit compliance.

Based on the guidance in the last paragraph above, only H-field measurements were made. Also, based on symmetry considerations as well as experimental measurements, the right side of the EUT was assumed to generate similar H-field strength readings as the left side of the EUT.

Limits from Table 1 in §1.1310(e)(1)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3–3.0	614	1.63	*(100)	≤6

Note: The limits shown above are the same for both occupational/controlled exposure and general population/uncontrolled exposure.

2.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 23.6 °C

Relative Humidity: 55.9 %

Atmospheric Pressure: 98.2 kPa

2.4 Test Equipment

Test End Date: 6-Sep-2024

Tester: EW

Equipment	Model	Manufacturer	Asset	Cal Date	Cal Due Date
ELECTROMAGNETIC FIELD METER	SMP2	WAVE CONTROL	20101	11-Apr-2023	11-Apr-2025
FIELD PROBE, ISOTROPIC, E AND H	WP400-3	WAVE CONTROL	20103	11-Apr-2023	11-Apr-2025
ENGLISH/METRIC TAPE MEASURE	TX1-26ME	STARRETT	15038	11-Dec-2015	ICO

2.5 Test Data

Ambient reading: 0.11 A/m

Distance between EUT & probe enclosures	Distance between EUT & probe sensing element ¹	Magnetic Field Strength (A/m)				Trigger opening ³
		Right ²	Back	Top	Bottom	
0 cm	1.5 cm	7.09	3.01	11.89	1.93	1.30
0.5 cm	2 cm	4.82	2.36	7.94	1.81	
2.5 cm	4 cm	2.40	1.64	3.59	1.15	
4.5 cm	6 cm	0.94	0.91	1.81	0.63	
6.5 cm	8 cm	0.64	0.57	1.02	0.40	
8.5 cm	10 cm	0.39	0.40	0.56	0.27	
18.5 cm	20 cm	0.13	0.14	0.14	0.13	

Notes:

1) Distance from outer surface of probe enclosure to probe sensing element is 1.5 cm

2) Measurements on Left side of EUT are considered equivalent to Right side measurements due to symmetry of EUT

3) Normal position of trigger finger places surface of finger at the same position as the probe sensing element during measurement

Conclusions:

- The equipment operator's finger placed on the trigger of the emitter is the only body part expected to be within 10 cm of the wireless charger (while charging) for a sustained period of time.
- Based on the data shown above, the magnetic field strength at the trigger finger position is below the permissible limit.
- Based on the data shown above, any position at or greater than 8 cm from the surface of the EUT is also below the permissible limit.
- Therefore, the EUT meets the requirements for permissible RF exposure for a minimum separation distance of 8 cm.

3 Measurement Uncertainty

Measurement uncertainty is not used to adjust the measurements to determine compliance.

Measurement	Frequency Range	Total Uncertainty (dB)
Electric Field – using SMP2 Field Meter with WP400-3 Probe	1 Hz to 400 kHz	0.67
Magnetic Field – using SMP2 Field Meter with WP400-3 Probe	1 Hz to 400 kHz	0.60

4 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	27 November 2024
1	- Corrected description of EUT in relation to MC2 system on title page and in section 1.3	05 December 2024
2	- Corrected lot and serial numbers in section 1.6	12 December 2024