RF Exposure Report (FCC)

Report No.:	EMC131030-FCC-RF Exposure
Test Model:	FCC Wall Switch
Test Date:	March 7, 2024
Issued Date:	April 30, 2024
Applicant:	Lutron Electronics
Address:	7200 Suter Rd Coopersburg, PA 18036
Issued By:	Eurofins Electrical and Electronic Testing NA, Inc.
Lab Address:	914 W. Patapsco Avenue, Baltimore, MD 21230

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TESTING CERT #0591.01

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1. Certificate of Conformity

Product:	FCC Wall Switch
Brand:	Lutron Electronics
Test Model:	FCC Wall Switch
WIFI FCC ID	JPZ0154
Applicant:	Lutron Electronics
Test Date:	March 7, 2024
Standard:	47 CFR FCC Part 2.1093

Donald Salguero
Wireless Lab

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of Part 22 Subpart H and Part 24 Subpart E and Part 27 Subpart L of the FCC Rules under normal use and maintenance.

Michael Griffiths
Manager, Wireless Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	April 30, 2024	Initial Issue.

2. RF Exposure

Requirement:

47 CFR 2.1091(c)(1)

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), whichever is greater. For mobile devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 of this chapter is necessary if the ERP of the device is greater than ERP20cm in the formula below. If the ERP of a single RF source at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP) in comparison with the following formula only 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).

47 CFR 2.1091(c)(2)

For multiple mobile or portable RF sources within a device operating in the same time averaging period, routine environmental evaluation is required if the formula in § 1.1307(b)(3)(ii)(B) of this chapter is applied to determine the exemption ratio and the result is greater than 1.

2.1   MPE Calculation Formula

$S = (Pout*G) / (4*pi*R^2)$

Where

S = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

FCC									
Frequency (MHz)	Con. Pwr. (dBm)	Con. Pwr. (mW)	Ant. Gain (dBi)	Ant. Gain numeric	Pwr. Density (mW/cm²)	Limit (mW/cm²)	Margin	Distance (cm)	Result
2480	19.98	99.541	2.5	1.778	0.03522	1	0.96478	20	Pass

Zigbee, RF Exposure

FCC									
Frequency (MHz)	Con. Pwr. (dBm)	Con. Pwr. (mW)	Ant. Gain (dBi)	Ant. Gain numeric	Pwr. Density (mW/cm²)	Limit (mW/cm²)	Margin	Distance (cm)	Result
2402	7.36	5.445	2.5	1.778	0.00193	1	0.99807	20	Pass

BLE, RF Exposure

3.   Conclusion

Conclusion:

The minimum separation distance as a mobile transmitter at worse case conditions is 20 cm.