RF Exposure Evaluation Report

1. Introduction

The EUT is a DJI Avinox Wireless Switch operated at 2.4GHz Bluetooth Low Energy.
Applicant: SZ DJI TECHNOLOGY CO., LTD.
Model: AWS01A
Product Type: DJI Avinox Wireless Switch

2. This report is issued by

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

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For FCC

RF exposure Estimation-SAR Exempt Evaluation

This exposure evaluation is intended for **FCC ID: SS3-AWS01A24**

Limit and Guidelines on Exposure to Electromagnetic Fields

According to§15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to 447498 D01 General RF Exposure Guidance v06, no SAR required if power is lower than the flowing threshold:
The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]
[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
• f(GHz) is the RF channel transmit frequency in GHz
• Power and distance are rounded to the nearest mW and mm before calculation25
• The result is rounded to one decimal place for comparison
• 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz.

Calculation method

[(max. power of` channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] *·[√f(GHz)] ≤ 3.0

Conducted Power + tune up tolerance =3.73dBm + 0dB= 2.36mW
Distance = 5 mm
f = 2.480 GHz

[2.36/5] * SQRT (2.480) =0.74
As 0.74≤ 3.0
Therefore, this product is excluded from SAR testing.

For ISED

Exemption from Routine Evaluation – SAR Evaluation

This exposure evaluation is intended for **IC: 11805A-AWS01A24**

Limit and Guidelines on Exposure to Electromagnetic Fields

According to RSS-102 Issue 6 § 6.3, Devices operating at or below the applicable output power levels (adjusted for tune-up tolerance) specified in table 11, based on the separation distance, are exempt from SAR evaluation. The separation distance, defined as the distance between the user and/or bystander and the antenna and/or radiating element of the device or the outer surface of the device, shall be less than or equal to 20 cm for these exemption limits to apply.

Table 11: Power limits for exemption from routine SAR evaluation based on the separation distance

Frequency (MHz)	≤ 5 mm (mW)	10 mm (mW)	15 mm (mW)	20 mm (mW)	25 mm (mW)	30 mm (mW)	35 mm (mW)	40 mm (mW)	45 mm (mW)	> 50 mm (mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

The exemption limits in table 11 Table 11 are based on measurements and simulations of half-wave dipole antennas at separation distances of 5 mm to 50 mm from a flat phantom, which provides a SAR value of approximately 0.4 W/kg for 1 g of tissue.

Calculation method

Maximum output power including tune-up tolerance of the EUT is 2.36mW (3.73dBm conducted power+0dBi antenna gain), and the minimum separation distance defined by the client is at least 5mm. According to the above table 11, the output power level is less than 4mw meet SAR exemption limits, so SAR evaluation is not required.