

TEST REPORT

Report Reference No.....: MTEB25020130-H

FCC ID.....: 2BNW3-WAD-001JS

Compiled by

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Date of issue.....: Feb.21,2025

Representative Laboratory Name.: Shenzhen Most Technology Service Co., Ltd.

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Applicant's name.....: Shenzhen WIOND Technology Co., Ltd.

Address.....: Room 205, Building 2, Yuanchuang Space, Xinniu Community,
Minzhi Street, Longhua District, Shenzhen, China

Test specification/ Standard.....: 47 CFR Part 1.1307

47 CFR Part 2.1093

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

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Test item description.....: Switch Controller

Trade Mark.....: N/A

Model/Type reference.....: WAD-001JS

Listed Models N/A

Modulation Type.....: FSK

Operation Frequency.....: 433.92MHz

Hardware version.....: XB150C-V02

Software version V1.0

Rating.....: Kinetic self-power generation

Result.....: PASS

TEST REPORT

Equipment under Test : Switch Controller

Model /Type : WAD-001JS

Listed Models : N/A

Remark : N/A

Applicant : **Shenzhen WIOND Technology Co., Ltd.**

Address : Room 205, Building 2, Yuanchuang Space, Xinniu Community,
Minzhi Street, Longhua District, Shenzhen, China

Manufacturer : **Shenzhen WIOND Technology Co., Ltd.**

Address : Room 205, Building 2, Yuanchuang Space, Xinniu Community,
Minzhi Street, Longhua District, Shenzhen, China

Test Result:	PASS
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.02.21	Initial Issue	Alisa Luo

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

2.1.3 EUT RF Exposure

$$\text{EIRP} = \text{PT} * \text{GT} = (\text{E} \times \text{D})^2 / 30$$

where:

PT = transmitter output power in watts,

GT = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, $10^{(\text{dB}\mu\text{V/m})/20} / 10^6$,

D = measurement distance in meters (m)---3m,

So $\text{PT} = (\text{E} \times \text{D})^2 / 30 / \text{GT}$

The worst case (refer to report MTEB25020130-R) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
433.92	71.88	Peak
433.92	48.64	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
433.92	71.69	Peak
433.92	48.65	Average

For 433.92MHz wireless:

Field strength=71.88dBuV/m

Ant gain 3dBi;so Ant numeric gain=2

$$\text{EIRP} = \text{PT} * \text{GT} = (\text{E} \times \text{D})^2 / 30 = (10^{(\text{dB}\mu\text{V/m})/20} / 10^6 * 3)^2 / 30 = 0.0000046$$

$$\text{So PT} = \text{EIRP} / \text{GT} = 0.0000046 \text{W} / 2 = 0.0023 \text{mW}$$

$$\text{So } (0.0023 \text{mW} / 5 \text{mm}) * \sqrt{0.43392 \text{GHz}} = 0.0003036$$

$$\text{exclusion} = 0.0003036 < 3.0 \text{ for 1-g SAR}$$

So the SAR report is not required.