

TEST REPORT

Report Reference No..... : MTEB25090253-H

FCC ID..... : 2BMMUZM002

Compiled by

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Supervised by

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Date of issue..... : Nov.18,2025

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

Address..... : No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name..... : Z.M.C. Metal Coating Inc.

Address..... : 40 Gaudaur Road, Woodbridge, Ontario L4L 4S6, Canada

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..... : 28mm Li-ion Bi-Directional Motor 2.0Nm

Trade Mark..... : N/A

Model/Type reference..... : ZM002-28-2.0

Listed Models : N/A

Modulation Type..... : FSK

Operation Frequency..... : 433.92MHz

Hardware Version..... : V1.0

Software Version..... : V1.0

Rating..... : DC5V, 2A, 26W
DC 10.8V by Battery

Result..... : PASS

TEST REPORT

Equipment under Test : 28mm Li-ion Bi-Directional Motor 2.0Nm

Model /Type : ZM002-28-2.0

Listed Models : N/A

Remark : N/A

Applicant : **Z.M.C. Metal Coating Inc.**

Address : 40 Gaudaur Road, Woodbridge, Ontario L4L 4S6, Canada

Manufacturer : **Ningbo Dooya Mechanic & Electronic Technology Co., Ltd**

Address : No. 168 Shengguang Road, Luotuo, Zhenhai, Ningbo, China 315202

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	2025.11.18	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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})} \right] \cdot \left[\sqrt{f(\text{GHz})} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz}$$

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,

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

The worst case (refer to report MTEB25090253-R1) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
433.92	81.9	Peak
433.92	54.01	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
433.92	81.24	Peak
433.92	53.88	Average

For 433.92MHz wireless:

Field strength=81.9dBuV/m

Ant gain 0dBi;so Ant numeric gain=1

$$\text{EIRP} = \text{PT} * \text{GT} = (\text{E} \times \text{D})^2 / 30 = (10^{(\text{dB}\mu\text{V/m})/20} / 10^6 * 3)^2 / 30 = 0.000046$$

$$\text{So PT} = \text{EIRP} / \text{GT} = 0.000046 \text{W} / 1 = 0.046 \text{mW}$$

$$\text{So } (0.046 \text{mW} / 5 \text{mm}) * \sqrt{0.43392 \text{GHz}} = 0.006072$$

$$\text{exclusion} = 0.006072 < 3.0 \text{ for 1-g SAR}$$

So the SAR report is not required.