

TEST REPORT

Report Reference No......: **MTEB24120303-H**

FCC ID.....: **2BMMUZM160**

Compiled by

(position+printed name+signature)..: File administrators Alisa Luo



Supervised by

(position+printed name+signature)..: Test Engineer Sunny Deng



Approved by

(position+printed name+signature)..: Manager Yvette Zhou



Date of issue.....: **Dec.24,2024**

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.

Shenzhen Most Technology Service Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Most Technology Service Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Most Technology Service Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description.....: Ergonomic RC

Trade Mark.....: N/A

Model/Type reference.....: ZM-160

Listed Models: N/A

Modulation Type.....: FSK

Operation Frequency.....: 433.92MHz

Hardware version.....: REV.2024-12-26

Software version: REV.2024-12-26

Rating.....: DC 3.7V by Battery

DC 5V by USB Port

Result.....: **PASS**

TEST REPORT

Equipment under Test : Ergonomic RC

Model /Type : ZM-160

Listed Models : N/A

Remark : N/A

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

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

Manufacturer : Shenzhen BOFU Mechanic & Electronic Co., Ltd.

Address : Building D, Hejing Industrial Zone 1, High tech Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen

Test Result:	PASS
---------------------	-------------

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	2024.12.24	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:

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

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,

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

The worst case (refer to report MTEB24120303-R) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
433.92	80.47	Peak
433.92	54.01	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
433.92	80.96	Peak
433.92	54.11	Average

For 433.92MHz wireless:

Field strength=80.96dBuV/m

Ant gain 2.5dBi;so Ant numeric gain=1.78

$$\text{EIRP} = \text{PT} * \text{GT} = (\text{E} \times \text{D})^2 / 30 = (10^{(\text{dB}\mu\text{V/m})/20} / 10^6 * 3)^2 / 30 = 0.0000374$$

$$\text{So PT} = \text{EIRP} / \text{GT} = 0.0000374 \text{W} / 1.78 = 0.0208 \text{mW}$$

$$\text{So } (0.0208 \text{mW} / 5 \text{mm}) * \sqrt{0.43392 \text{GHz}} = 0.00274$$

exclusion=0.00274<3.0 for 1-g SAR

So the SAR report is not required.