

RF Exposure Evaluation Report

Report Reference No...... : **MTEB25010175-H**

FCC ID..... : **2BMMUZM111**

Compiled by

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Supervised by

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Date of issue..... : **Jan.20,2025**

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..... : UQ 27mm HC Li-ion Motor 1.1Nm

Trade Mark..... : N/A

Model/Type reference..... : ZM-111

Listed Models : N/A

Modulation Type..... : GFSK

Operation Frequency..... : From 2402MHz to 2480MHz

Hardware Version..... : 25.130

Software Version..... : 25.130

Rating..... : DC 7.4V by Battery
DC 5V by USB Port

Result..... : PASS

TEST REPORT

Equipment under Test : UQ 27mm HC Li-ion Motor 1.1Nm

Model /Type : ZM-111

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
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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.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.01.20	Initial Issue	Alisa Luo

2. SAR Evaluation

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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \left[\sqrt{f(\text{GHz})} \right]$$

 ≤ 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

Measurement Data

BLE

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	0.385	0.385 ± 1	1.385
Middle(2440MHz)	0.200	0.200 ± 1	1.2
Highest(2480MHz)	0.636	0.636 ± 1	1.636

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold	SAR Test Exclusion
		(dBm)	(mW)			
Highest(2480MHz)	0.636	1.636	1.46	0.46	3.0	Yes

.....**THE END OF REPORT**.....