# RF EXPOSURE REPORT

| | |
|---|---|
| Product Name: | ThinkNode-M4 |
| FCC ID: | 2BDNA-TNM4-ELE |
| Trademark: | N/A |
| Model Number: | M4 for Meshtastic, M4 for Tracker, M4 for Meshcore |
| Prepared For: | Shenzhen Elecrow Limited |
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| Sample Received Date: | Aug. 26, 2025 |
| Sample tested Date: | Aug. 26, 2025 to Oct. 13, 2025 |
| Issue Date: | Oct. 13, 2025 |
| Report No.: | CTB25082609805RF04 |
| Test Standards | FCC CFR 47 part1, 1.1307(b), 1.1310, 47 CFR§2.1091; KDB 680106 D01 Wireless Power Transfer v04 |
| Test Results | PASS |
| Remark: | This is wireless charger EMF report. |

| Compiled by: | Reviewed by: | Approved by: |
|---|---|---|
| Zhou Kui | Arron Liu | |
| Zhou Kui | Arron Liu | Bin Mei / Director |

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "*" indicates the testing items were fulfilled by subcontracted lab. "#" indicates the items are not in CNAS accreditation scope.

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# 1. GENERAL INFORMATION

## 1.1. Independent Operation Mode

The basic operation mode is:

1.1.1. wireless charger power: 5W/7.5W/10W/15W

## 1.2. Test Supporting System

Adapter
Description: Adapter
Model No.: HP18A-0902000-AU
Power Input: AC100-240V~ 1.0A 50/60Hz
Output: 9V ⎓ 2.0A
DC Line: Unshielded, Detachable 1.2m

## 2.LIST OF TEST AND MEASUREMENT INSTRUMENTS

2.1. For conducted emission at the mains terminals test

| Item | Equipment | Brand | Model No. | Frequency Range | Last calibration | Calibrated until |
|---|---|---|---|---|---|---|
| 1 | EMF TESTER | Wavecontrol | SMP600/WP400-3 | 15SN0164/21WP1200029 | 2024.10.28 | 2025.10.27 |

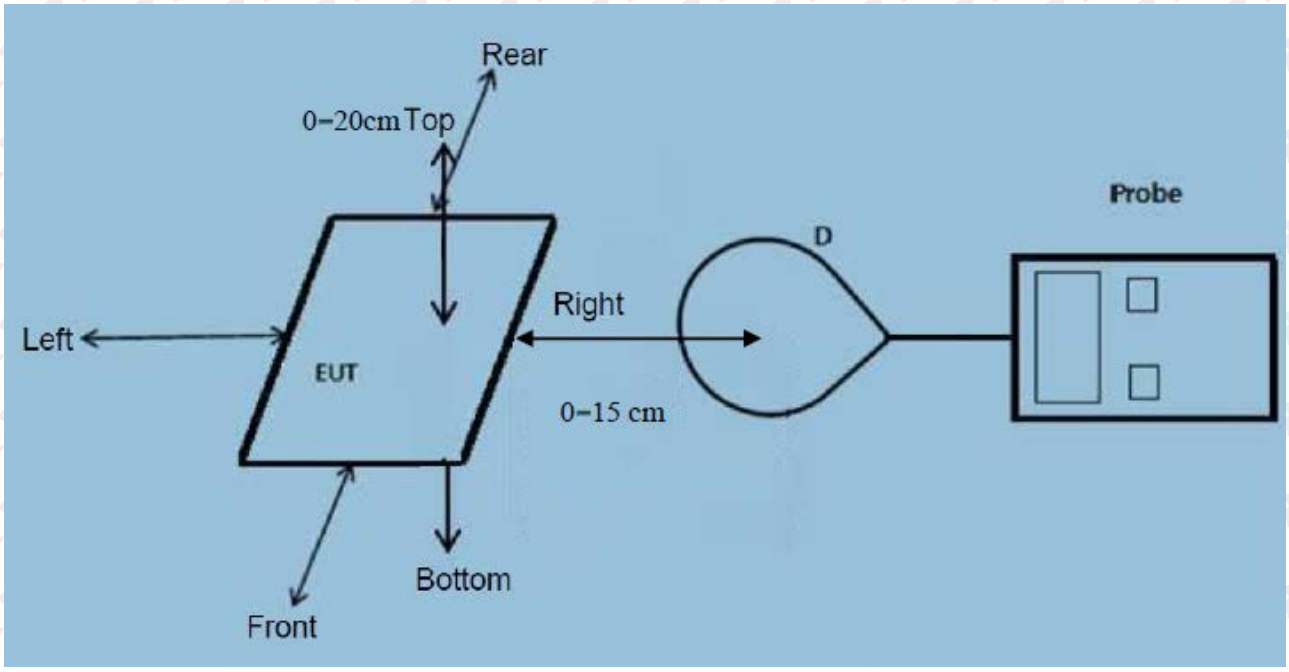
## 3. METHOD OF MEASUREMENT

3. 1.Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1091 RF exposure is calculated. According to KDB 680106 D01 Wireless Power Transfer v04.

## 4. TEST RESULT

4.1. Conducted Emission at the Mains Terminals Test




Note: Measurements should be made from all sides and the top of the primary/client pair, with the 20 cm-0cm measured from the center of the top, and 15cm-0cm measured from the center of the rest

**Test Procedure:**

a) The RF exposure test was performed on 360 degree turn table in anechoic chamber.
b) 20 cm-0cm measured from the center of the top, and 15cm-0cm measured from the center of the rest sides.
c) The turn table was rotated 360d degree to search of highest strength.
d) The highest emission level was recorded and compared with limit as soon as measurement of each points were completed.
e) The EUT were measured according to the dictates of KDB 680106 D01 Wireless Power Transfer v04.

4.2. Equipment Approval Considerations:

The EUT does comply with item 5(b) of KDB 680106 V04

1) Power transfer frequency is less than 1MHz

Yes, the device operate in the frequency range from 110kHz to 205kHz

2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

Yes, the maximum output power of the primary coil is 15000mW.

3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact).

Yes, the surfaces of the transmitter and client device enclosures are in physical contact

4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions)..

No, the EUT is portable condition assessment.

5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1.

Yes, the EUT field strength levels are less 50% x MPE limit.

6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions.

Yes, the EUT has only one coil，all test modes met the conditions specified in (5).

4.3. E and H field Strength

H-Filed Strength at 20 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.21 | 0.21 | 0.18 | 0.18 | 1.63 |

H-Filed Strength at 20 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.21 | 1.63 |

H-Filed Strength at 18 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.27 | 0.26 | 0.26 | 0.26 | 1.63 |

H-Filed Strength at 18 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.27 | 1.63 |

H-Filed Strength at 16 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.28 | 0.29 | 0.28 | 0.27 | 1.63 |

H-Filed Strength at 16 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.29 | 1.63 |

H-Filed Strength at 14 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.30 | 0.31 | 0.32 | 0.33 | 1.63 |

H-Filed Strength at 14 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.32 | 1.63 |

H-Filed Strength at 12 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.37 | 0.38 | 0.39 | 0.36 | 1.63 |

H-Filed Strength at 12 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.34 | 1.63 |

H-Filed Strength at 10 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.38 | 0.38 | 0.39 | 0.37 | 1.63 |

H-Filed Strength at 10 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.38 | 1.63 |

H-Filed Strength at 8 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.40 | 0.41 | 0.42 | 0.41 | 1.63 |

H-Filed Strength at 8 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.43 | 1.63 |

H-Filed Strength at 6 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.47 | 0.48 | 0.46 | 0.45 | 1.63 |

H-Filed Strength at 6 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.43 | 1.63 |

H-Filed Strength at 4 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.50 | 0.51 | 0.50 | 0.49 | 1.63 |

H-Filed Strength at 4 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.51 | 1.63 |

H-Filed Strength at 2 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.52 | 0.51 | 0.53 | 0.50 | 1.63 |

H-Filed Strength at 2 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.52 | 1.63 |

The probe center is 1.65cm from the coil surface, according to KDB 680106, date at 0cm must be estimated through a modle, and then the model must be validated with the actual measurements at 2cm.

Using Biot-Savart Law, the value of 2cm can be estimated through the test result of 4cm

H-Filed Strength at 2 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.53 | 0.51 | 0.52 | 0.49 | 1.63 |

H-Filed Strength at 2 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.50 | 1.63 |

Using Biot-Savart Law, the value of 0cm can be estimated through the test result of 2cm

H-Filed Strength at 0 cm from the edges surrounding the EUT (A/m)

| Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Limits (A/m) |
|---|---|---|---|---|---|
| 0.110-0.205 | 0.55 | 0.52 | 0.50 | 0.53 | 1.63 |

H-Filed Strength at 0 cm from the top of the EUT (A/m)

| Frequency Range (MHz) | Test Position E | Limits (A/m) |
|---|---|---|
| 0.110-0.205 | 0.54 | 1.63 |

The difference between measurements and estimates is no more than 30%

So the estimates in 0cm is ok

※※※※※THE END※※※※※