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|--|--|---|---------------------------|--------------------------------|
| Prüfbericht-Nr.: <i>Test report no.:</i> | CN25BIL1 002 | Auftrags-Nr.: <i>Order no.:</i> | 168510742 | Seite 1 von 10 Page 1 of 10 |
| Kunden-Referenz-Nr.: <i>Client reference no.:</i> | N/A | Auftragsdatum: <i>Order date:</i> | 2024-10-30 | |
| Auftraggeber: <i>Client:</i> | IKEA of Sweden AB Box 702, SE-343 81, Älmhult, Sweden | | | |
| Prüfgegenstand: <i>Test item:</i> | Wireless charger (VÄSTMÄRKE) | | | |
| Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i> | E2400-P | | | |
| Auftrags-Inhalt: <i>Order content:</i> | Test Report | | | |
| Prüfgrundlage: <i>Test specification:</i> | CFR47 FCC Part 2.1093 KDB 680106 D01 Wireless Power Transfer v04 | | | |
| Wareneingangsdatum: <i>Date of sample receipt:</i> | 2024-10-30 | Please refer to Photo Document | | |
| Prüfmuster-Nr.: <i>Test sample no.:</i> | A003883966-002 | | | |
| Prüfzeitraum: <i>Testing period:</i> | 2024-10-30 - 2025-06-13 | | | |
| Ort der Prüfung: <i>Place of testing:</i> | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| Prüflaboratorium: <i>Testing laboratory:</i> | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| Prüfergebnis*: <i>Test result*:</i> | Pass | | | |
| geprüft von: <i>tested by:</i> | <u>X Hardy</u> Hardy | genehmigt von: <i>authorized by:</i> | <u>X Lin</u> Lin | |
| Datum: <i>Date:</i> | 2025-06-18 | Ausstellungsdatum: <i>Issue date:</i> | 2025-06-18 | |
| Stellung / Position: | Sachverständige(r)/Expert | Stellung / Position: | Sachverständige(r)/Expert | |
| Sonstiges / <i>Other:</i> | FCC ID: FHO-E2400-P | | | |
| Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i> | Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i> | | | |
| * Legende: | P(ass) = entspricht o.g. Prüfgrundlage(n) | F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | N/A = nicht anwendbar | N/T = nicht getestet |
| * Legend: | P(ass) = passed a.m. test specification(s) | F(ail) = failed a.m. test specification(s) | N/A = not applicable | N/T = not tested |
| Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i> | | | | |

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Test report no.:

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Anmerkungen
Remarks

- | | |
|---|--|
| 1 | <p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p> |
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| 3 | <p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p> |
| 4 | <p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i></p> |

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China

A2LA Certificate Number: 5162.01

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

| EMF | | | | | | |
|------------|--------------------------------------|--------------|---------|------------|------------|------------|
| Equip. No. | Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
| 9050046 | Electric and Magnetic Field Analyzer | Narda | EHP200A | 180ZX20517 | 22.09.2023 | 21.09.2025 |

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

| Parameter | Uncertainty |
|--------------------------------|-------------|
| Magnetic Field Emissions (A/m) | 1.5dB |
| Electric Field Emissions (V/m) | 1.5dB |

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

TÜV Rheinland (Shenzhen) Co., Ltd. test facility located at No. 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a Wireless charger, which supports wireless charging (WPT) function.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

| General Information of EUT | | Value |
|--------------------------------|------------------------|--|
| Kind of Equipment: | | Wireless charger (VÄSTMÄRKE) |
| Type Designation: | | E2400-P |
| FCC ID: | | FHO-E2400-P |
| Operating Voltage: | | 5.0V=3A, 9.0V=2.2A |
| Test Voltage: | | AC 120V, 60Hz (power supply to external adapter) |
| Operating Temperature Range: | | 0 °C ~ +40 °C |
| Wireless output power: | | 5.0W/7.5W/10W/15.0W Output: 15.0W Max |
| Technical Specification of WPT | | |
| Output | Frequency Range: | 110.5kHz to 205kHz 360kHz |
| | Type of Modulation: | FSK |
| | Antenna Type: | Coil antenna |
| | Antenna Number: | 1 |
| | Wireless output power: | 110.5kHz to 205kHz: 5W, 7.5W, 10W 360kHz: 15W |

3.3 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.4 Submitted Documents

- Application Form
- Block Diagram
- ID Label and Location Info
- User Manual
- Schematics
- Operation Description

3.5 Special Accessories and Auxiliary Equipment

| Description | Manufacturer | Model No. | Note |
|----------------|--------------|-----------|--|
| iPhone 14 Plus | Apple | MQ3D3CH/A | n/a |
| iPhone 11 | Apple | MHF13CH/A | n/a |
| AC/DC Adapter | IKEA | E2501-NA | Input: AC 110-240V, 50/60Hz Output: 5.0 V, 3.0 A, 15.0 W, 9.0 V, 2.22 A, 20.0 W, 12.0 V, 1.67 A 20.0 W, 15.0 V, 1.33 A, 20.0 W |

4 Radio Frequency Exposure Compliance

4.1 Test Procedures According to the Technical Standards

| Standard Section | Test Item | Judgment |
|---|-----------------------------------|----------|
| FCC CFR 47 part1, 1.1310 KDB 680106 D01 Wireless Power Transfer v04 | Electric Field Strength (E) (V/m) | PASS |
| | Magnetic Field Strength (H) (A/m) | PASS |

4.2 Limit of Maximum Permissible Exposure

| Limits for Occupational / Controlled Exposure | | | | |
|---|-----------------------------------|-----------------------------------|--|--|
| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm ²) | Averaging Time E ² , H ² or S (minutes) |
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 |
| 3.0-30 | 1842 / f | 4.89 / f | (900 / f)* | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | | | F/300 | 6 |
| 1500-100,000 | | | 5 | 6 |

| Limits for General Population / Uncontrolled Exposure | | | | |
|---|-----------------------------------|-----------------------------------|--|--|
| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm ²) | Averaging Time E ² , H ² or S (minutes) |
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180 / f)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | | | F/1500 | 30 |
| 1500-100,000 | | | 1 | 30 |

Note 1: f = frequency in MHz; *Plane-wave equivalent power density.

Note 2: For the applicable limit, see FCC 1.1310, KDB 680106 D01 Wireless Power Transfer v04.

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310:614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

4.3 Test result

| E-field strength (V/m) | | | |
|-------------------------------|-----------------------|------------------------|--------------|
| Test Frequency | 110kHz to 205kHz (5W) | 110kHz to 205kHz (10W) | 360kHz (15W) |
| Front | 1.359 | 2.338 | 5.095 |
| Back | 1.624 | 1.468 | 3.582 |
| Left | 1.676 | 1.583 | 3.508 |
| Right | 1.312 | 1.748 | 3.902 |
| Top | 1.272 | 1.285 | 5.132 |
| Bottom | 1.282 | 0.981 | 2.795 |
| Limits (V/m) | 614 | 614 | 614 |
| H-field strength (A/m) | | | |
| Test Frequency | 110kHz to 205kHz (5W) | 110kHz to 205kHz (10W) | 360kHz (15W) |
| Front | 0.086 | 0.095 | 0.062 |
| Back | 0.062 | 0.087 | 0.057 |
| Left | 0.071 | 0.088 | 0.059 |
| Right | 0.093 | 0.133 | 0.062 |
| Top | 0.132 | 0.184 | 0.101 |
| Bottom | 0.198 | 0.279 | 0.181 |
| Limits (A/m) | 1.63 | 1.63 | 1.63 |

Test distance=10 cm

5 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

6 List of Tables

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