

Prüfbericht-Nr.: <i>Test report no.:</i>	CN22IHJM 002	Auftrags-Nr.: <i>Order no.:</i>	168394651	Seite 1 von 12 <i>Page 1 of 12</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2022-10-17	
Auftraggeber: <i>Client:</i>	Shenzhen Kinlan Technology Company Limited West of 3F, Building A4, Yinlong Industrial Park No.292 Shenshan Road, Longgang District, Shenzhen, Guangdong, China			
Prüfgegenstand: <i>Test item:</i>	MAGNETIC WIRELESS CAR CHARGER			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	991060902, 065639-991060902-0804, WCH003			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	FCC CFR Title 47, Part 1, Subpart I, Section 1.1310 KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2022-11-09	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003367003-008~009			
Prüfzeitraum: <i>Testing period:</i>	2022-11-15 to 2022-12-04			
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>	genehmigt von: <i>authorized by:</i>			
Datum: <i>Date:</i>	2022-11-10		2022-11-10	
Stellung / Position:	Senior Project Manager		Reviewer	
Sonstiges / Other:	FCC ID: 2AE3CWCH003			
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:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable
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 a. m. 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 Summary

5.1.1 RF EXPOSURE (MAGNETIC FIELD STRENGTH)

RESULT: Pass

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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.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Accreditation Designation No.: CN1260

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

RF Exposure				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
"Van der Hoofden" test head	Schwarzbeck	VDHH 9502	159	2023-08-01
EMF Tester	NARDA	ELT-400	D-0009/D-0010	2023-01-14

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.

Parameter	Uncertainty
H-filed	1.5 μ T
E-filed	13%

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

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 362 Huanguan Road Middle Longhua District, Shenzhen 518110 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 MAGNETIC WIRELESS CAR 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 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	MAGNETIC WIRELESS CAR CHARGER
Type Designation:	WCH003
Additional Model:	991060902, 065639-991060902-0804 Note: only difference on the model name and packaging.
FCC ID:	2AE3CWCH003
Operating Voltage:	USB operated
Technical Specification of WPT	
Frequency Range:	110~205KHz
Type of Modulation:	FSK
Antenna Number:	1
Antenna Type:	Coil antenna
Wireless output rated power:	5W / 7.5W / 10W

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, EPP (10W)
- B. On, SAMSUNG
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- ID Label and Location Info
- Schematics
- Operation Description
- Block Diagram
- PCB Layout

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in KDB 680106 D01.

According to clause 3.1, all tests were performed on model WCH003 in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 3: Auxiliary Equipment Used during Test

Description	Manufacturer	Model	S/N	Rating
Electric Load	YBZ	YBZ2.1	N/A	N/A
Car charge	N/A	S170Q2	N/A	Input: DC 12V-24V Output: 5V/3A, 9V/1.67A, 12V/1.25A

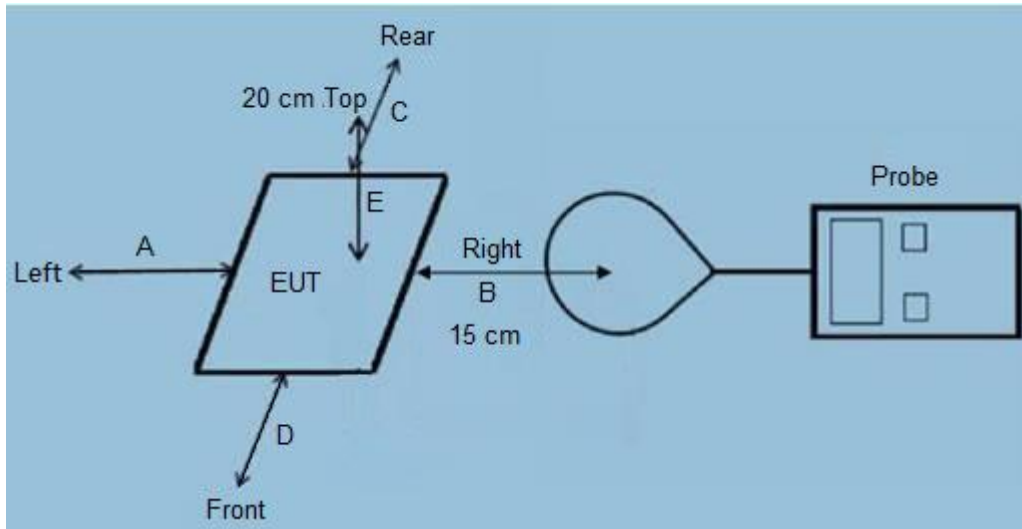
4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for RF Exposure



Note: The measurement probe was placed at test distance(15 cm from edges, 20 cm from top) Which is between the edge of the charger and the probe.

5 Test Results

5.1.1 RF Exposure (Magnetic Field Strength)

RESULT:
Pass
Test Specification

Test standard

: FCC Part 1.1310
: KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

Limits

:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

Kind of test site

: Shielded Room

Test Setup

Date of testing : 2022-12-02
Input voltage : DC 12V
Operation mode : A, B
Ambient temperature : 25.2°C
Relative humidity : 50.3%/
Atmospheric pressure : 101 kPa

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H-Filed Strength at (15 cm from edges A,B,C,D, 20 cm from top E) surrounding the EUT (A/m)

EPP (10W)						
Charging Load Worse case	Test Position A (A/m)	Test Position B (A/m)	Test Position C (A/m)	Test Position D (A/m)	Test Position E (A/m)	Limits (A/m)
>90%	0.232	0.235	0.229	0.236	0.241	1.63
50%	0.105	0.129	0.097	0.128	0.182	1.63
<5%	0.085	0.073	0.026	0.055	0.068	1.63

SAMSUNG						
Charging Load Worse case	Test Position A (A/m)	Test Position B (A/m)	Test Position C (A/m)	Test Position D (A/m)	Test Position E (A/m)	Limits (A/m)
>90%	0.246	0.243	0.238	0.234	0.239	1.63
50%	0.114	0.158	0.107	0.122	0.131	1.63
<5%	0.093	0.082	0.072	0.062	0.091	1.63

6 Photographs of the Test Set-Up

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

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