RF EXPOSURE Test Report

Product: Magnetic Wireless Car Charger

Trade Mark: N/A

Model Number: YC-WH019

FCC ID: 2BKJA-YC-WH019

Prepared for

Dongguan Ronghe Electronic Co., Ltd

201, Building 2, No. 5, Lindong 3rd Road, Lincun, Tangxia Town, Dongguan City, Guangdong Province

Prepared by

Shenzhen HongBiao Certification& Testing Co., Ltd

Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China

Tel.: +86-755-2998 9321 Fax.: +86-755-2998 5110

Website: http://www.sz-hongbiao.com

Table of Contents

TEST RESULT CERTIFICATION

Applicant's Name	:	Dongguan Ronghe Electronic Co., Ltd
Address	:	201, Building 2, No. 5, Lindong 3rd Road, Lincun, Tangxia Town, Dongguan City, Guangdong Province
Manufacturer's Name	:	Dongguan Ronghe Electronic Co., Ltd
Address	:	201, Building 2, No. 5, Lindong 3rd Road, Lincun, Tangxia Town, Dongguan City, Guangdong Province

Product description

Product name	:	Magnetic Wireless Car Charger
Model Number	:	YC-WH019
Standards	:	FCC CFR 47 PART 1 , 1.1310
Test procedure	:	KDB 680106 D01 Wireless Power Transfer v04

This device described above has been tested by Shenzhen HongBiao Certification& Testing Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the EMC requirements. And it is applicable only to the tested sample identified in the report.

Date of Test	:	
Date (s) of performance of tests	:	Aug. 15, 2024~ Aug. 31, 2024
Test Result	:	**Pass**

Testing Engineer : Zoe Su

(Z o e S u)

Technical Manager : Ming Liu

(M i n g L i u)

Authorized Signatory : Leo Su

(L e o S u)

Revision History

Revised No.	Date of Issue	Description
01	Aug. 31, 2024	Original

1 General Description

1.1 Description of EUT

Product name:	Magnetic Wireless Car Charger
Model name:	YC-WH019
Series Model:	N/A
Different of series model:	N/A
Operation frequency:	115kHz~205kHz
Operational mode:	Wireless charging
Modulation type:	FSK
Antenna type:	Coil Antenna
Input:	5V/2A, 9V/2A
Battery:	N/A
Power supply:	Input: 5V/2A, 9V/2A Wireless Output: 5W, 7.5W, 10W, 15W
Adapter information:	N/A

1.2 Test Mode

Pretest Test Mode	Description of Mode
1	Wireless Output: 15W
2	Wireless Output: 10W
3	Wireless Output: 7.5W
4	Wireless Output: 5W

1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.4 Ancillary Equipment

Equipment	Model	S/N	Manufacturer
Adapter	TA65B	2S36003438 PL97T09582	Powerland Technology Inc.
Phone	LE2120	98d9b780	Shenzhen Oneplus Technology Co., Ltd

2 Test Facilities and Accreditations

2.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
FCC Registration No.:	CN1341
A2LA Certificate No.:	6765.01

2.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15ºC~35ºC
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

2.3 Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.
The data and results quoted in this document are true and accurate values, and uncertainties are not involved in the calculations.
In addition, components and mass production processes that are similar to testing equipment may introduce additional deviations, and the manufacturer is solely responsible for the continued compliance of the equipment.

Measurement Frequency Range	U，(dB)	Note
RF frequency	$2x\ 10^{-5}$	
E-field	± 1.06 dB	
H-field	± 0.7 dB	
Temperature	±1 degree	
Humidity	± 5 %	

2.4 Test Software

Software name	Manufacturer	Model	Version
EHP200-TS	Narda	EHP-200A	Rel 1.95

3 List of Test Equipment

Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E073	Electric and Magnetic Field Analyzer	Narda	EHP-200A	180ZX11013	2024-05-21	2025-05-20

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4 RF Exposure

4.1 Maximum Permissible Exposure

4.1.1. Limit

Frequency range(MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density(mW/cm2)	Averaging time(minutes)
(A) 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	6
300-1500			f/300	6
1500-100000			5	6
(B) 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
300-1500			f/1500	30
1500-100000			1	30
f = frequency in MHz * = Plane-wave equivalent power density				

4.1.2. Test Procedures

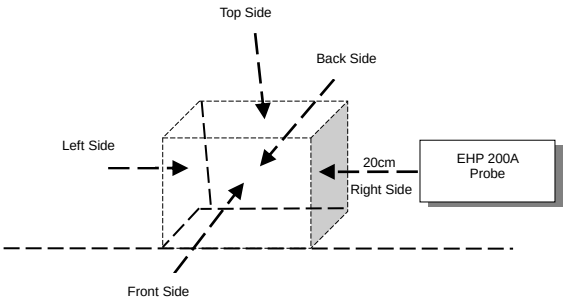
E and H-field measurements should be made with the center of the probe at a distance of 20 cm surrounding the device and 20 cm above the top surface of the primary/client pair.
These measurements should be repeated for three different client battery levels, 1%, 50%, and 99%.
Record the test results.
KDB 680106 D01 Wireless Power Transfer v04
(1) The power transfer frequency is below 1 MHz.
(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.
(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)
(4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).
(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. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios
(i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.
(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. If the

design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.

4.1.3. Equipment Approval Considerations item 5 b) of KDB 680106 D01 Wireless Power Transfer v04

Requirement	Device
1. Power transfer frequency is less than 1 MHz.	Yes. The operating frequencies are: 115kHz~205kHz
2. Output power from each primary coil is less than or equal to 15 watts	Yes. The maximum output power is: Wireless Output: 15W,10W,7.5W,5W
3. The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes. EUT has a source primary coil.
4. Client device is placed directly in contact with the transmitter.	Yes. The client device is placed directly in contact with the transmitter.
5. Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes. Mobile exposure conditions only.
6. The aggregate H-field strengths anywhere at or beyond 20 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes. See the test result in item 4.1.5

4.1.4. Test Setup



4.1.5. Test Result

Test distance: 20cm
Test condition: Mode 1 operating mode with client device (1 %, 50%, 99% battery status of client device)

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<1%	Top	20	2.9754	0.0495
<1%	Left	20	2.1234	0.0456
<1%	Right	20	2.2818	0.0462
<1%	Front	20	2.1218	0.0435
<1%	Back	20	1.7065	0.0465
Limit			614	1.63
Margin Limit (%)			0.48%	3.04%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<50%	Top	20	2.9714	0.0478
<50%	Left	20	2.1222	0.0442
<50%	Right	20	2.2804	0.0453
<50%	Front	20	2.1201	0.0427
<50%	Back	20	1.7052	0.0462
Limit			614	1.63
Margin Limit (%)			0.48%	2.93%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<99%	Top	20	2.9685	0.0471
<99%	Left	20	2.1204	0.0429
<99%	Right	20	2.2789	0.0445
<99%	Front	20	2.1198	0.0412
<99%	Back	20	1.7044	0.0445
Limit			614	1.63
Margin Limit (%)			0.48%	2.89%

5 Photographs of the Test Setup

MPE


******** END OF REPORT ********